

September 1993

BOARDWATCH

MAGAZINE

Guide to Online Information Services and Electronic Bulletin Boards

Presenting... **THE TOP 100 BBSs**

Readers' Choice Awards

Modem Price War Continues!

Supra Drops Sysop Price
on 144 + FAX to \$149.95

#8
Odyssey
Monrovia CA
(818) 358-6968

Genealogy Research Online

Finding Your Ancestors
at V.32 bis Speeds

#6
Westside
Los Angeles CA
(213) 933-4050

#7
Albuquerque ROS
Albuquerque NM
(505) 299-5974



JPEG
Graphics Standard for
Photo-Realistic Images
Catches On

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#2
EXEC-PC
Elm Grove WI
(414) 789-4210

#4
PC-OHIO
Cleveland OH
(216) 381-3320

#9
Wizard's Gate
Columbus OH
(614) 224-1635

#1
Software Creations
Clinton MA
(508) 368-7139

#5
GLIB
Arlington VA
(703) 578-4542

#10
Pleasure Dome
Norfolk VA
(804) 490-5878

#3
deltaComm Online
Cary NC
(919) 481-9399

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THE TOP 100 BBSs

READERS' CHOICE BBS CONTEST

IN ORDER OF NUMBER OF VOTES RECEIVED BETWEEN JANUARY 1 AND JUNE 30, 1993 - 20,200 VOTES CAST

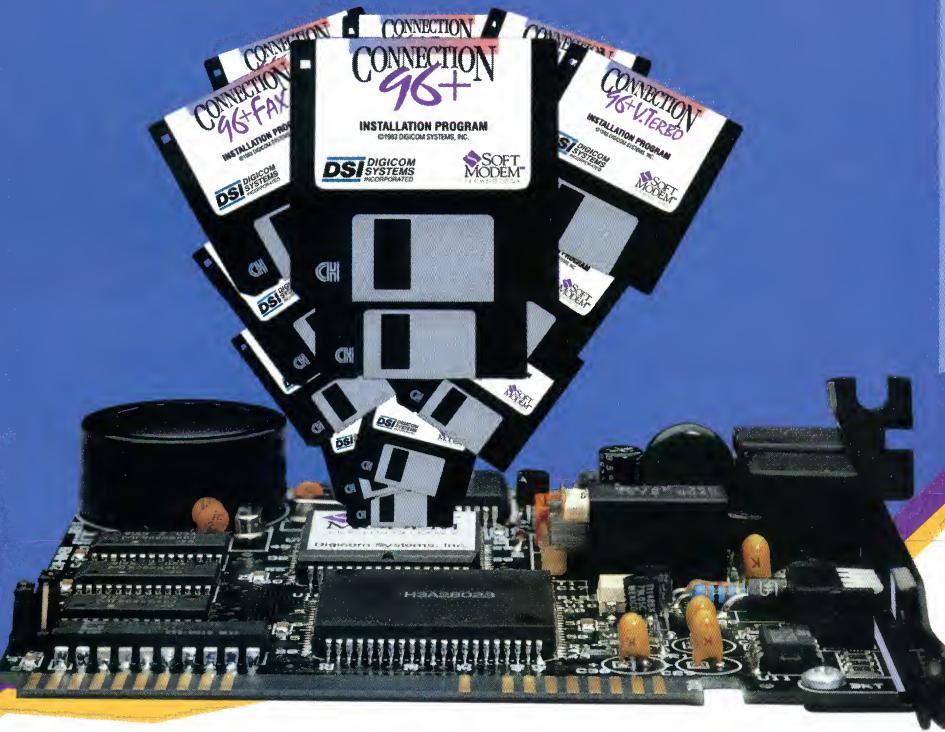
PLACE	TITLE	PHONE	DESCRIPTION	SOFTWARE LINE	OPERATOR	LOCATION
1.	Software Creations	508-368-7139	Home BBS for Apogee, and many other shareware producers	PCBoard	83	Dan Linton Clinton, MA
2.	EXEC-PC	414-789-4210	World's largest BBS, 35Gig, most anything you need	Custom	280	Bob Mahoney Elm Grove, WI
3.	deltaComm BBS	919-481-9399	Support board for Telix Communications software	PCBoard	10	Zack Jones Cary, NC
4.	PC-OHIO	216-381-3320	Internet, 3000 message areas, 400 file areas, 250 doors	PCBoard	35	Norm Henke Cleveland, OH
5.	GLIB	703-578-4542	Information serving the gay, lesbian, and bisexual community	TBBS	22	Jon Larimore Arlington, VA
6.	Westside	213-933-4050	SprintNet access, very large file base, many great features	Custom	132	Dave Harrison Los Angeles, CA
7.	Albuquerque ROS	505-299-5974	Home of ROS BBS, 60000+ files, active social issues	ROS	14	Steven Fox Albuquerque, NM
8.	Odyssey	818-358-6968	Where adults come to play and meet, active chats	Custom	118	Michael Allen Monrovia, CA
9.	Wizard's Gate BBS	614-224-1635	FREE, no fee, ASP BBS, full access on first call 12Gig	SHBS	10	Joseph Balshone Columbus, OH
10.	Pleasure Dome	804-490-5878	Sexually explicit, adults only, ladies free	Wildcat	10	Tom McElvy Norfolk, VA
11.	Blue Ridge Express	804-790-1675	Message areas, 84+ files areas, 21000+ files	RBBS	36	Webb Blackman Richmond, VA
12.	Deep Cove BBS	604-536-5885	Internet, 7Gig file area, CD-ROMs, ZYXEL modem sales	TBBS	20	Wayne Duval White Rock, BC
13.	Totem Pole BBS	313-238-1178	4Gig, 97 file areas, 419 message areas, 24 doors	Wildcat	4	Alan Myers Flint, MI
14.	Planet BMUG	510-849-2684	100 forums, gateways to OneNet & BMUG Boston	FirstClass	17	Dong-Gyom Kim Berkeley, CA
15.	Prostar BBS	206-941-0317	Home of MajorNet, 200000+ files, Interlink chats, 100+ games	MajorBBS	91	Robert Michnick Auburn, WA
16.	Chrysalis	214-690-9295	Internet, Connex, 30Gig, chat, encyclopedia	TBBS	32	Garry Gross Pano, TX
17.	OS/2 Shareware	703-385-4325	2000+ OS/2 files, 25 areas, 50 message area	Maximus/2	8	Pete Nonhoff Fairfax, VA
18.	Microtree Infoservice	908-494-8666	Fidonet, 14 CD-ROMs, online games, since 1982	TBBS	9	John Klein Metuchen, NJ
19.	Nashville Exchange	615-383-0727	Internet, Usenet, Fidonet, 10Gig files, online games	TBBS	24	Ben Cunningham Nashville, TN
20.	Eagle's Nest BBS	303-933-0701	FREE access to all, 1.3Gig, very nice single line system	QuickBBS	1	Ron Olsen Littleton, CO
21.	Plains Bulletin service	701-281-3390	Great Plains Software support for GPS Partners	PCBoard	4	Rob Kirkey Fargo, ND
22.	City Lights	612-633-1366	Adult files & echoes, 600 message areas, 5.7Gig, 35000+ files	Wildcat	6	Brian Elert Arden Hills, MN
23.	Lifestyle	516-689-5390	Adult lifestyles, personal ads, e-mail, personal contacts	Oracomm	32	Marc Kraft Lake Grove, NY
24.	Monterey Gaming System	408-655-5555	Chat, messages, e-mail, online games, fun entertainment	Custom	24	David Janakes Monterey, CA
25.	Wind City Freedom Fort	709-564-1069	Adults only, over 4000 original scanned graphics	Wildcat	38	Robert Copela Northbrook, IL
26.	Micro Message Service	919-779-6674	Internet, excellent Ham Radio area, 7Gig, family BBS	TBBS	12	Mike Stroud Raleigh, NC
27.	Liberty BBS	714-996-7777	Nationwide chat, e-mail, news, games, internet	MajorBBS	57	Stephen Grande Anaheim Hills, CA
28.	File Bank	303-534-4646	Astronomy, Ham radio, programming, adult files	TBBS	16	Brian Barrie Denver, CO
29.	Cracker Barrel	703-899-0020	Medical/Diabetes info, real-time games, 88 message areas	RA	4	Kevin Graham Falmouth, VA
30.	Source BBS	310-371-3737	General interest, Fidonet e-mail, news files daily	Wildcat	6	Chip North Torrance, CA
31.	America's Suggestion Box	516-471-8625	Focused on collecting & distributing consumer feedback	TBBS	16	Joe Jerszynski Ronkonkoma, NY
32.	Garbage Dump BBS	505-294-5675	Adult chat, dating registry, games, national access	MajorBBS	69	Dean Kerl Albuquerque, NM
33.	Windows On Line	501-736-8343	Premier Windows file service, 10000+ 3.x files	PCBoard	18	Frank Mahaney Danville, CA
34.	Springfield Public Access	413-536-4365	Internet e-mail, focus on Genealogy, Ham Radio, Windows	TBBS	16	Matthew De Jongh Springfield, MA
35.	O.U. BBS	405-325-6128	Internet, telnet, 3Gig files, online games, PIMP, chat	TBBS	8	Ronnie Parker Norman, OK
36.	AlphaOne	708-827-3619	Online shopping, 30+ games, 200+ echoes, 30000+ files	TBBS	22	Toby Schneiter Park Ridge, IL
37.	Advanced System BBS	702-334-3308	Internet, Fidonet, 16Gig, TBBS enhancements	TBBS	48	Alan McNamee Reno, NV
38.	Godfather	813-289-3314	Fidonet, Usenet, adult areas, graphics, GIFs, new files	PCBoard	6	Jim Sharer Tampa, FL
39.	Fantasy Party Line	713-596-7101	Social gatherings, live chats, great users	DLX	32	Charles Henderson Houston, TX
40.	Hello Central	206-641-7218	Adult recreational computing, fun without the kids	MajorBBS	20	Stan Shelhamer Bellevue, WA
41.	Datamax/Satellite	214-443-9434	Live ftp & telnet, 10Gigs, large adult area	PCBoard	21	Ron Brandt Ivyland, PA
42.	Tampa Connection	813-961-8665	Matchmaker Pen-Pal Network, 11000+ user database	Custom	16	Bobby Dominguez Tampa, FL
43.	H Infonet	203-738-0342	Professional, technical, & business oriented, Windows files	PCBoard	18	Lee Winsor New Hartford, CT
44.	Radio Wave BBS	609-764-0812	ASP BBS, RIME: 4Gig files, 4000+ newsgroups	PCBoard	2	Tyler Myers Delran, NJ
45.	Executive Network	914-667-4567	10Meg new files daily, 4000 message areas, Internet	PCBoard	20	Andy Keeves Mt Vernon, NY

48	Legend of Roseville BBS	313-776-1975	4.5Gig, message areas, files.	7	Richard Leneway	Roseville, MI	
49	Radio Daze BBS	219-256-2255	Worldwide echoes, 6.3 Gig, 65000+ files, USR HS modems.	Wildcat	9	Michael Shannon	Mishawake, IN
50	CoSNUG BBS	719-578-6088	Mainly for Seniors, open to the public	TBBS	2	Joe Adams	Colorado Springs, CO
51	Rusty and Edies BBS	216-726-2620	All shareware, 9Gig, high adult section, USR 16.8 modems.	PCBoard	72	Rusty Hardenburgh	Youngstown, OH
52	Space BBS	415-323-4193	Internet e-mail, 3000 newsgroups, Rime, Ilink, a most active BBS.	PCBoard	10	Owen Hawkins	Menlo Park, CA
53	TechTalk	407-635-8833	Six CD-ROMS, USR 16.8 modems, PIMP, internet, techtalk.com	TBBS	8	Jerry Russell	Cocoa, FL
54	Holitana BBS	404-992-5345	Social chat system for open minded & adventurous adults.	DLX	32	Mike Deen	Roswell, GA
55	24th Street Exchange	916-448-2483	General IBM MS-DOS files and support, ASP BBS, Fidonet, chat.	DLX	24	Don Kufworth	Sacramento, CA
56	Mog-UFR's EMS	818-366-1238	Internet, 2.8Gig, 6 CD-ROMs, 15 nets, 300 file areas.	Wildcat	5	Tom Trimpold	Granada Hills, CA
57	After Hours	512-320-1650	Best little BBS in Texas	MajorBBS	32	Conrad Ruchelman	Austin, TX
58	Starship II BBS	201-935-1485	General interest, 10Gig, Chat, 100+ message areas.	TBBS	32	Phil Buonomo	Lyndhurst, NY
59	Prime Time BBS	818-982-7271	Live multi-user games, chat, Interlink, files.	MajorBBS	16	Bill Martian	Burbank, CA
60	3rd Eye BBS	615-227-6155	Adult system serving the responsible swinging lifestyle.	TBBS	8	Michael Vetter	Nashville, TN
61	Arizona Online	602-294-9447	Massive adult area, 20000+ files, 3Gig online.	SuperBBS	3	Shawn Striplin	Tuscon, AZ
62	Digicom BBS	812-479-1310	Product Support BBS list, adult area with games, 2.7Gig.	RA	8	Gary Barr	Evansville, IN
63	Cajun Clickers BBS	504-756-9658	Online games, 4.4Gig, no fees, 11000+ files.	PCBoard	4	Michael Vierra	Benton Rouge, LA
64	Channel 1	617-354-8873	3500 message area, 120 online games, internet, 30Gig.	PCBoard	85	Brian Miller	Cambridge, MA
65	KBBS Los Angeles	818-886-0872	4.4Gig of shareware, online games, chats, chatlink.	MajorBBS	50	Dale Porter	Canoga Park, CA
66	Eagles Nest Communications	401-732-5290	Internet, Usenet, RIME, Ilink, Paranet, 50000+ files.	PCBoard	10	Mike Labbe	Providence, RI
67	Argus	617-674-2345	Active chat, 40000+ files, internet, newsgroups, games.	MajorBBS	65	Pam Morrison	Lexington, MA
68	TCSNet	206-692-2388	Newsgroups, Rime, MetroLink, online services.	PCBoard	22	Al Charpentier	Silverdale, WA
69	S-Tek	514-597-2409	Montreal's premiere Gay & Lesbian BBS, G&L BBS List.	TBBS	10	Eric Blair	Montreal, QC
70	Infoquest	618-453-8511	RIP, Fidonet, Internet, 1Net, 100000 files, many online games.	PCBoard	4	Charles Strusz	Carbondale, IL
71	One Stop PCBoard BBS	509-943-0211	16.8 modems, 900 messages areas.	PCBoard	6	Gary Heidberg	Richland, WA
72	Kandy Shack	714-636-2667	Ilink, UNI-net, ASP member, 2.4Gig online, USR 16.8 modems.	PCBoard	9	Mike Bernstein	Garden Grove, CA
73	Texas Talk	214-497-9100	Adult chat, matchmaking, games, parties, CD-ROMs.	TBBS	32	Sunnie Blair	Richardson, TX
74	BCS BBS	213-962-2902	Home of Cal-Link, Ilink, e-mail, general interest.	Wildcat	5	Bill Weinman	Hollywood, CA
75	Higher Powered BBS	408-737-7040	Ilink, SmartNet, SciFact, FredNet, 1Gig files.	PCBoard	3	Bob Jacobson	Sunnyvale, CA
76	Zoo BBS	312-907-1831	Adult social network, chats, gay, bi, straight welcome.	DLX	16	Chuck Goes	Chicago, IL
77	Toolkit	219-696-3415	Resource for programmers and power users.	ProDoor	1	Ken Prevo	Lowell, IN
78	Electronic Tribune	505-823-7700	Operated by the Albuquerque Tribune, news and information.	MajorBBS	20	David Carlson	Albuquerque, NM
79	YA WEBECAD	812-428-3870	PSL library, ASP BBS, 72000+ files, 11.8Gig, adult file area.	Wildcat	4	Dan Habegger	Albuquerque, NM
80	Wayne's World	918-665-0061	Large filebase, online games, latest new files.	FeatherNet	3	Wayne Greer	Tulsa, OK
81	TGC Services	812-284-1321	Adult BBS for all users over 18, 2.6Gig, GIFs & animations.	Wildcat	3	David Heath	Clarksville, IN
82	Computers & Dreams	212-888-6565	Internet, Usenet, Rime, 40 doors, 10000+ new files.	PCBoard	10	William P. Stewart	New York City, NY
83	WinPlus	206-630-8203	Christian values, family fun, everyone welcome.	MajorBBS	26	Bill Ryalls	Kent, WA
84	U.S.A. BBS	501-753-8575	Internet, all major filebase areas, online games, 10Gig.	TBBS	16	Jeff Johnson	N. Little Rock, AR
85	Capital City Online	206-956-1206	Internet, Usenet, 1.2Gig 100+ online games, chat.	Wildcat	6	Joe Goeller	Lacey, WA
86	Nightbreed	512-345-5099	Games, messages, files, users.	MajorBBS	8	Randy Faulk	Austin, TX
87	Cloud 9	619-737-3097	Chat, Internet e-mail, trivia, 50000+ files, online CPA.	PCBoard	6	Devin Singletor	St. Petersburg, FL
88	Mercury Opus	813-321-0734	Internet, 80000+ files, MS-DOS, Windows, OS/2...	Searchlight	5	Rick Rosinski	Midland, MI
89	Wolverine	517-695-9952	Official SkyGlobe support, Searchlight sales & support.	MajorBBS	32	Rob Murdock	Kent, WA
90	Heat in The Night	515-386-6227	Free Adult BBS, chats, dates, and fun.	FirstClass	6	Roz Ault	Boston, MA
91	BMUG Boston	617-721-5840	East coast BMUG, gateways to OneNet & Planet BMUG.	GAP	4	Les Jones	Santa Barbara, CA
92	Seaside	805-964-4766	ASP BBS, 100+ online games, 450 message areas.	CNet	5	Dennis Ryan	Bridgeport, CT
93	Psycho Ward BBS	203-371-8769	Free system, 1.3Gig, IBM, Amiga, MAC.	RA	12	Walt Lane	Kansas City, MO
94	File Shop BBS	816-587-3311	RIP, 2200 file areas, 28Gig, 310000+ files, 85 online games.	Wildcat	2	Bill Paez	Atwater, CA
95	Aces Place	209-357-8424	Message areas, new files, helpful staff.	RA	2	Nick Francesco	Rochester, NY
96	Frog Pond	716-461-1924	Supporting MS-DOS & cp/M with great files and zany users.	PCBoard	200	Neil Fleming	Mississauga, ON
97	CRS	416-213-6002	Canada's largest online system, very large file area.	Wildcat	19	Hans Braun	San Francisco, CA
98	Studs	415-495-2929	Adult conversation, AIDS/HIV news and information.	PCBoard	3	Leonard Hult	Dallas, TX
99	Collector's Edition	214-351-9859	ASP BBS, CD-ROMS, 28 file areas, online games.	TBBS	3	Mark Chambers	Columbia, MO
100	Batboard	314-446-0475	For BATMAN fans, RIP, NAPLPS, custom GIF & FLI files.				

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Connection 96+ Software Upgradeable Modem



SoftModem™ Technology

- Save money while keeping pace with changing standards
- Upgrade features as needed through software
- Keep up with latest revisions FREE through BBS downloads
- Guaranteed compatibility with all current industry standards
- Five year warranty

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ScoutPlus™
Fax Modem

PC/Computing, June '93



Your FREE Upgrade To 14,400 bps Is Just The Beginning.



Connection 96+ also includes a Membership Kit for Prodigy® Interactive Personal Service.

Thanks to Digicom Systems' exclusive SoftModem™ Technology, Connection 96+ keeps you up-to-date. It's engineered to keep pace with evolving technology, so you don't have to buy a new modem every time you need a new feature. Connection 96+ includes an immediate **free** software upgrade to 14,400 bps. Future upgrades include V.42bis data compression, *send/receive fax* and 19,200 bps data transmission. Connection 96+ lets you buy what you need today and still get what you want tomorrow!

Connection 96+ Built-In Features: CCITT V.32 Modulation (9600/4800 bps) • CCITT V.22bis, Bell 212A (2400/1200 bps) • V.42 (LAPM) and MNP 4 Error Control • Built-in Speaker for Line Monitoring • Autobaud and Automatic Speed Negotiation • DTE Speeds up to 115k bps • Flow Control Selection (Xon/Xoff or RTS/CTS) • Configurable COM Ports 1-4, IRQ 3, 4, 5, 9 • Extended AT Command Set • V.54 Test Modes and Diagnostics • 16550 UART Compatibility • FCC Class A/B Approved • Qmodem Lite

Software Upgradeable Features: CCITT V.32bis Modulation (14,400/12,000/7200 bps) FREE • CCITT V.42bis Data Compression FREE • V.32terbo (19,200/16,800 bps de facto standard) • **Send and Receive Fax Now Available!** . . . and more.



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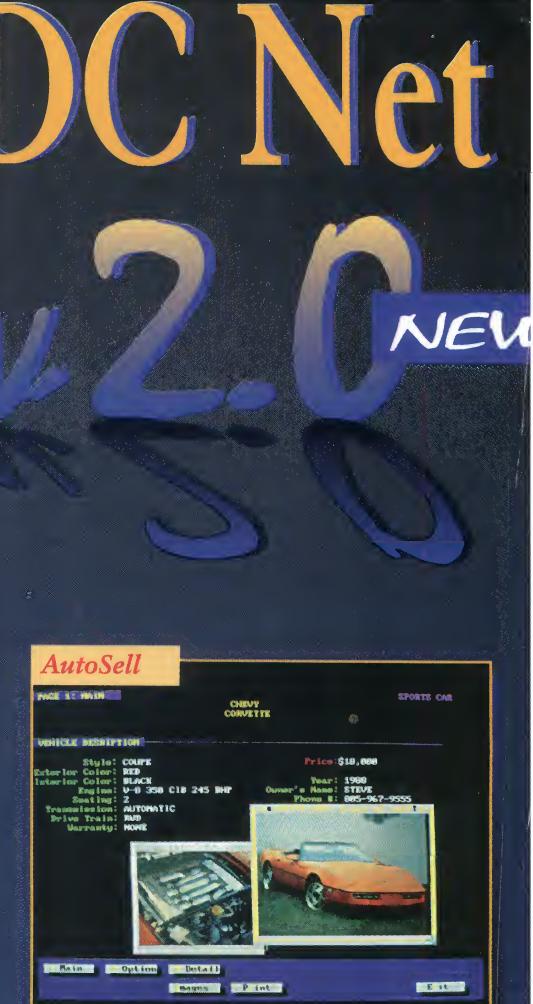
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EDITOR'S NOTES

DO CATTLE DREAM AND CAN PIGS FLY?

We hear from BBS operators. I suppose it's natural and pretty much to be expected. It's not so much that we hear from BBS operators, as it is WHAT we hear from BBS operators. Accustomed to operating bulletin boards for similarly intrigued technoids, for years they yearned for wider recognition and wider participation from normal people. This year, they got it. And the translation from small community of PC enthusiasts to the wider world has some problems.

Three operators have called in the past week with fear in their voices and trouble in their hearts. One had his BBS hauled off by the local police. Two were facing TV crews, one on a local news station and one on the nationally syndicated Donahue talk show. The shows were all ready written and scripted SEX ONLINE. The BBS operators were simply asked to wear shirts with bull's eyes on them and stand in front of the camera.

The online world is analogous to the real world in many ways and it does reflect it. But it isn't the real world. In many, many respects, it is a fantasy. We are all equal. None of us have handicaps. None of us are old. None of us are ugly. There are no fat people online. No short people. Nobody stutters. Nobody wets their pants. There is no pain. There is no crime. We are all safe. We all have good intentions. We can all pseudo-travel around the continent or world for pennies. We can fall in love and never have to wake up, chew our arm off at the shoulder, and slip quietly out into the dawn. Or even deal with morning breath. Rub a lamp.

It does take a certain level of imagination to play. And frankly, a good percentage of the real world population can barely get dressed and get to work after a lifetime of practice. Fortunately, for most of them, the modems and technology are all still too much to tackle. And a tremendous number of people are just living for the moment when they can be offended about something or another. We hear from THEM occasionally as well. If I could grant them the gift of the

other twelve IQ points they would need to be able to bark like a dog, I would give it to them freely, but it just isn't something you can do.

And the thin lightless line where CyberSpace meets the parking lot distorts reality in both directions. If you print out a log of CyberSpace, and read it on clean white paper, it appears to be things that it is not. Likewise, if you carry too much of the parking lot online, you're going to be a bit confused. Pigs can fly online, but pigs still can't fly.

I know that this is the editorial where I should note that I "told you so" last November and that you really have to clean up these GIF images of slobbering overweight babes of the night to save your systems. And in a practical sense, I suppose you do. They really



aren't center stage in all of this anyway. But it would help if I could look into the eyes of the cattle, and see some sense of awareness of what they are doing, and what the price really is as they "crack down" on the online community. Will it in fact stop with "obscenity?" IS that all that they are after?

Had we really insisted that the airline industry obey all existing automobile traffic laws, we might still have an airline industry, but it would work very differently. It might make perfect sense. It might be perfectly legal. And it might even work. But it would result in some very slow, low flying aircraft with a technologically very

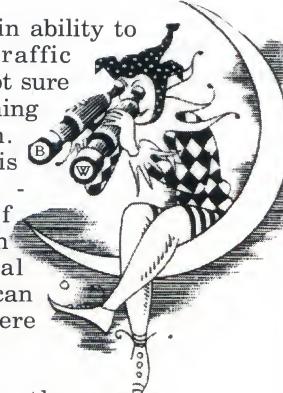
hard won built in ability to stop at each traffic light, and I'm not sure that is a good thing in the long run.

The price paid is hard to gauge - particularly if you're waiting on the Presidential haircut so you can take off. But there would be a price.

For the media, the sex online story is about the only handle they've been able to get on it so far. You can't have thirteen million people doing something obsessively that almost no one was doing a few years back and not cover it. And this is the easy story. Children can access blurry images of sex by simply taking a computer, a modem, a terminal program, a telephone line, blending them all together to log onto a service, convince the BBS operator they are 21 years old, and paw through 9 GB of files to find a hundred or so slimy ones, download them, and try to get their VGA card driver working right with a GIF image viewing program. It's simple. Actually, they are being SUBJECTED to this. I don't know about you, but I'm glad I was raised in an age where a boy only had to worry about hiding it under his bed carefully. ALL the rationalizations for this witch hunt are just too strained - too contrived, to be real. Yeah, some of the images are disgusting. So are some TV commercials.

But what's next? What if someone commits a crime somewhere, AND was online at some time? We really need to be able to identify these people, don't we? It ALWAYS starts with the most extreme cases, and migrates to 4-line BBSs with shareware CD-ROMs. If you give an inch, they'll take all of it. And if Mr. Koresh is any example, they want their inch real badly.

The online community is the ONLY medium where everyone can be heard. Not just those who own large publishing conglomerates, and not those who own television and radio stations. Freedom of speech in the past has been easy - anyone was allowed to speak their mind (within certain restrictions) because we could be assured only a handful could hear them. The online technologies have



the potential to assure, for the very first time, that anyone's voice can span a continent. It may serve as the first REAL test of what our commitment to free speech is - or isn't. How badly, as a society, do we WANT people to be able to speak freely in a forum that might just be effective? And what price are we willing to pay to allow that, or perhaps to secure it? A big contingent of the herd is very restless at the uneasy thought of no intellectual fences. For those able - think about it....

Jack Rickard
Editor Rotundus

LETTERS TO THE EDITOR

Address correspondence to LETTERS TO THE EDITOR, Boardwatch Magazine, 8500 West Bowles, Ave., Suite 210, Littleton, CO 80123; by email to letters@boardwatch.com, or by fax to (303)973-3731.

Dear Mr. Rickard:

Please find enclosed my check for \$59 for a two year subscription to "Boardwatch". I enjoy the brashness of your prose although I do not always agree with your outspoken opinions. However, the letters alone are, debatably, worth the price of admission.

In your June issue you recount your experience of reading "Byte" magazine for 15 consecutive years to achieve a certain level of subject understanding and seem to advise a reader to follow "Boardwatch" for a similar period to achieve a similar understanding of your subject matter. Although I have little doubt that "Boardwatch" will survive that period, as a 71 year old retiree I am not at all sure that I will. (Are subscriptions assignable?)

With that thought in mind I would like to find a path to substantially expedite the learning process. Some six years ago I was quite active (at least as a visitor) in the BBS world. Upon coming to Mexico and TelMex I gave up due to an apparent attitude on the part of TelMex that each caller should be given the opportunity to finance the entire TelMex network improvement program. Since a great

deal has happened in the last six years I find that I am unfamiliar with current configurations, capabilities, etc. However, I have acquired a Gateway 2000 (386 DX) and installed an internal Gateway Telepath modem - V.32bis, V.32, V.22, V.22bis, V.21, V.42, V.42bis, FAX mode Group 3, etc. using Qmodem, X-Talk and WinFax 'n all that stuff operating at some near supersonic speed that should reduce TelMex's take to a few wrinkled pesos! With some difficulties (a broken blade on my favorite skinnin' knife), this system is now installed and working, by cracky!!

Neawo thin!!! Are there any publications that provide a description of the nets, how they tie together, how you find addresses, how you send messages, what all this costs, etc. etc? A few years ago I purchased a Compuserve "Starter Kit" and spent several hours wandering through an endless succession of menus like a deer lost in the woods, until I was forced to abandon the project just short of turning over my entire pension to TelMex. This is not, from here, a viable route. It appears desirable to seek more "book larnin" prior to again connecting up to the TelMex Corporate Treasury.

I might point out that if you were to publish such an article(s) one time, the future demand could be filled by reprints and or addenda (and someday you could publish a book and retire), all at great profit to "Boardwatch" and J.R. (i.e. you too, could move to Mexico and live off my pension!!)

If you don't have time right now - never mind, but send the subscription anyway.

Hoping for your early attention to this matter, I am

Sincerely,
El Gringo Viejo
R.M Titus
Jalisco, Mexico

Mr. Titus:

I checked with TelMex (the telephone company in Mexico) on your behalf. They inform me they do in fact want the entire pension, and ask that you please send it in soonest. Apparently there have been some momentary delays between when you receive your check,

and when you pass it on to them. They sounded genuinely concerned, and asked that I pass on their wishes for your continued good health for many years to come.

My reference to Byte was perhaps unclear. It did not require 15 years to "achieve a certain level of subject understanding" through reading Byte - certainly less than a year in fact. But had Byte focused on the novice information I originally needed, it would not have been useful once I passed that novice stage. I would have outgrown it before the first renewal period. It has held my ATTENTION for a full 15 years after I learned the basics - which took a few months and a bit of effort on my part.

And it did so by following the industry with pernicious attention to detail and a knowledgeable view of what was going on, through MANY cycles of new hardware, new software, new techniques, and so forth. Because of this experience, we at Boardwatch early on adopted a rather militant stance against "talking down" to the reader and against seeking least common denominator status. Certainly this limits our growth, our financial prospects, and our subscriber base. But it makes it an interesting magazine for us to produce, and for those who do follow the industry to read. So let Bill Ziff retire to Mexico. I'm busy.

But the larger issue you raise is the definitive or all encompassing article or book that will "make you smart" on this technology and the labyrinth of online services. Were it available, I assure you I most certainly would not have personally written it, because I would be off doing something else. Compendiums and definitive works are always done AFTER the final brick is laid, the final wire strung, the final rail has been nailed into place. They tend to be historical in nature - mapping how it WAS done.

Boardwatch covers an infant industry, just emerging from the minds of men and women hellbent over the kitchen table, for reasons good or ill, on changing the way people communicate - with computers. It is technical in a lot of places, but actually goes quite beyond that - to change the span and reach of the individual - to the point where we can all live in Mexico or anywhere else and still have an impact anywhere on the planet we wish.

Boardwatch's role is to try to pick out the pieces we think matter AS THEY DEVELOP and as they are pioneered, and report on them to a readership we assume absolutely to be gentlemen and scholars all - and many of which we happen to know are a lot smarter than we are. If anyone wants to act like a gentleman and scholar, and try to GET smarter than THEY are, they're welcome to join us on the journey. But it is a journey. And when it evolves to become a destination, I'll be long gone.

In the evolution of these technologies, it is my fondest hope that one day we can all tell monolithic monopolistic entities such as your telephone company - to go to Tel.

Try Dvorak's Guide to PC Telecommunications (Osborne McGraw Hill), Becker's "Introduction to PC Communications" (Que Books), and John Quatermann's "The Matrix" (DEC Press).

Jack Rickard

Hi Jack!

The August 1993 Boardwatch was the second one I've picked up recently. I'm fascinated by both the technology and the social aspects of computer networking. If this keeps up I might have to subscribe! But, what is this problem you have with UNIX? Your bashing of the "UNIX community" in the editor's notes, while amusing, was in stark contrast to the well-informed, open-minded way you seem to deal with other topics. I would say that the "UNIX community" and the "BBS community" have a lot in common. For instance, some (not all) members of each community are so immersed in "their" jargon, shared assumptions, and technology that they can't imagine how off-putting it can be to the outsider. Both are religions in a way. Ironically, the UNIX "religion" started as a rebellion against the overly complex, user-hostile mainframe operating systems that dominated at the time.

Let's try an experiment. I'll take a short passage from your editorial and replace "UNIX" with "BBS". Ready? "The interface to BBS isn't an interface at all. It's a test. And BBS aficionados actually perceive that the world should in fact learn BBS and pass the test." I have dialed up BBS

systems that gave me this exact feeling. If it had been a UNIX shell interface instead, I would have had a much easier time of it. But I realize that this is not because one interface is good and the other bad — it is because one is familiar to me and one is not. Nor do I assume that nobody in the BBS community knows or cares about providing a suitable user interface for the uninitiated. I just assumed that that particular sysop had other priorities.

Paul Perkins
perkinsp@delphi.com

Paul:

I don't quite buy your plug and play exercise with terms. I write very little by accident - it's hard enough to do it on purpose. The UNIX mantra does exceed the normal jargon/love of the familiar that IS quite pervasive throughout technology. THAT WAS in fact the point. That said, I don't really have any problem with UNIX other than I don't buy the party line on what it can and can't do. That does tend to irritate the more devout UNIX apologists, but there you have it. I do think much of what drives the Internet and an increasingly "connected" world has come out of this UNIX community. Some of my best friends are devoted to UNIXology.

Jack Rickard

Jack,

I have just finished reading the August 1993 issue of Boardwatch magazine and I would like to thank you for providing such a good magazine.

I have just recently re-discovered the online world having been away from it for about five years. A few months ago I bought a new 486dx33 with a good modem and hit the boards here in Houston, Texas. I also hit the news stands in search of a magazine that would guide me through the muck of online services. I spent a lot of money before finding Boardwatch and I now have ended my search for a satisfying online service and a good magazine.

The online service I have found is Delphi. The Internet gateway is the most amazing thing I have ever come across. It is what I used to dream about when I was twelve and calling

the local c-64/Atari boards. I really connected to your "We look for things" motto that you mentioned in the 8/93 issue. I have the same excited feeling when I read your magazine - like I have found a whole new world that is growing larger and more exciting every day.

I would also like to comment on the article describing how to take advantage of Genie's new rate schedule. I think it is great that you can spend just a few minutes a day actually online and still get a lot done. It sounds very boring though. Who wants to get on a system and not look around a little bit? Maybe do some chatting or just read a few news articles.

I just cancelled my Prodigy account after finding Delphi and I feel liberated. The cost is less and I am connected to the entire world, not just an electronic island.

Again I would like to thank you for the excellent publication. There are a lot of "bubble-gum" magazines out there describing the online world and it is nice to find a meat and potatoes guide that does not take it to the Mondo-2000 extremes. Not that I don't like to get extreme.

Take care,
Steven Baker
Houston, Texas
Internet:
STEBENBAKER@DELPHI.COM

Steve:

Personally, I share your spirit of exploration. I do like to browse about. But it is an experience in travel, and part of what makes the online world so fascinating is its many levels and layers. One of those is simply using e-mail and participating in a few conferences. And many find it much less expensive, and less of a press of time, to do it on their own machine, on their own desktop, at their own leisure. I'm pretty onboard with that concept frankly, and ultimately, I think e-mail wants to be very personally nailed to the individuals desktop, and the delivery details firmly uploaded to be someone else's problem. This drives the popularity of offline mail readers, utilities such as Alladin, OZCIS, TAPCIS, and others to tap into commercial online services, and increasingly, Windows and Mac programs to make the Internet connection.

Many callers automate this to such a degree, they couldn't tell you when their machine actually made the call to do mail. They still have all the tools to go on a walkabout online, but they can handle their personal e-mail and keep track of a few dozen discussions of continued interest without even being in the room when the magic digits are dialed.

Jack Rickard

Jack:

Here in Downriver Detroit there is a project called "The Cynedd Project" dedicated to pairing up homebound (sick, handicapped, injured) children and used computer systems. The goal is to have these isolated children communicate with "key-pals" from all over via the Internet and Native American Network. Although we only have 2 children active right now...as soon as the next complete system has been put together, the next child will be found through children's hospitals, schools, and other agencies. Computer clubs and BBS members have been actively working on this since May of this year.

Another real need came to light while we were working on this. There are no BBSes in our area, that cater to young children. Many of the Sysops have young children, many of my BBS friends have small children, but there is no place attractive to the under ten year old child.

I wonder if you have ever heard of a board so dedicated. If so I would appreciate knowing the number so I can explore and research it (or them) and talk with the persons involved. I can't believe that it hasn't been tried, but I have not been able locate anyone who has ever heard of a Kiddie Board.

Laura Bashlor
lauralou@gatecom.com

Laura:

I've heard vague rumors of Barbinets and BBS's for tots over the years, but frankly, few come to mind at the moment. One that does that I've always been a bit intrigued with is Noel Stookey's CELEBRATION STATION in Blue Hill Falls Maine. (207)374-5161. Noel is "Peter" in "Peter, Paul and Mary", a folk song group among whose

credits are "Puff the Magic Dragon." Noel is apparently quite taken with children and started his BBS specifically for children.

Perhaps some of our readers can forward information on BBSs specifically for children in response to your letter. Somebody has got to be doing a list on this.

Jack Rickard

Hi Jack,

Having been an avid reader of Boardwatch for over a year now, (and a subscriber via a friend in the US) I have been meaning to get down and write a short note to you to tell you that BBSing is alive and well on the Southern tip of Africa! I also wanted to say that Boardwatch is an absolutely invaluable publication for anyone even remotely connected to BBS's. It might be the smallest of the 5 mags I read each month, but it is the one I read from cover to cover!

I've been a BBS user for a few years and an online addict for as long! I also publish a unique BBS listing covering South Africa, on a monthly basis. As far as I know it's one of it's kind, in that it creates the dialing directories for a few of the most popular comms programs based on the users selection criteria. RFYYMM.ZIP.

Back to the South African BBS scene and a few stats as at end June 93.

Number of active BBS's - 157

Active being the operative word! I don't know what it's like overseas but BBS's open and close at a rate of knots!

Mail Networks
FidoNet - 75
RsaNET - 20
Link - 11

BBS Software split

Remote Access - 89
PCBoard - 34
Maximus - 8
Wildcat - 5
UltraBBS - 5
Other - 16

What's interesting here is when one converts the number of boards to the

number of nodes, the Remote Access dominance is less apparent.

Remote Access = 95 Nodes
PCBoard = 67 nodes.

Plus of course if we were able to ascertain the registered software stats, PCBoard would win hands down, as all of them are registered.

Most of the big boards (and in South Africa anything over 5 nodes is considered big) run PCBoard. In fact all the big boards bar one which runs MajorBBS run it. If you publish my letter I will expect a rush of abuse from the RA boys that I get from time to time when I show my bias towards PCBoard. ;-)

Mail packet split
QWK Packet - 105 nodes
Bluewave - 56 nodes

Although the QWK format is dominant at the moment, unless Sparky spends another half an hour to dream up QWK II, I can see the limitations of the QWK packet causing more and more boards to switch to BlueWave. I understand that a release of Bluewave for PCBoard is eminent and that could very well change the stats.

Modem Split (Nodes)
USRobotics HST - 65
2400 and MNP5 - 63
V.32bis - 55
V.32 - 19
Speedmodems - 7
ZyXel - 6

The modem stats have changed dramatically in the last year with the advent of the cheaper V.32 and V.32bis modems making their appearance. The HST price reductions also helped! ;-) Although the ZyXel modem is only just making it's appearance in South Africa I think it's going to have a much bigger market share within the next year.

BTW I'm not a Sysop.... with having to dial each BBS in my list each month to verify that they still exist, and an active echomailer as well, I don't have the time, money or the inclination to run a board! ;-)

Talking about money... some of the boards in S.A. are at last starting to make a small profit or at least covering costs. We have a relatively small modem population in South Africa,

and it's unlikely that a BBS's income could support a Sysop for some time to come. Trying to get publicity for BBS's here is a major task. Of course the only stuff they consider newsworthy is the occasional porn board that gets busted and the never ending garbage that is spewn out about viruses.

We do however get some indirect publicity though the advertising of the government Prestel System called Beltel. At least it gets people to buy a modem! Once they have the modem they may be lucky enough to find out about a BBS and then they download my list and we hook another addict!

Compuserve has also arrived in South Africa via Compuserve Africa. Unfortunately it's just too expensive for the man in the street, as apart from the normal Compuserve charges that we would incur at our horrendous exchange rate, there is an addition cost for the high speed line from Pretoria to Compuserve that we have to pay for. :-(But it again highlights the use of modems.

Once again, many thanks for a great magazine Jack. We'll be thinking about you all having fun at ONE BBSCON and maybe I'll rob a bank next year so that I can join you! ;-)

Kind Regards
Rob Fisher
FidoNet Netmail 5:7103/1.1
rob.fisher@softel.proxima.alt.za

Rob:

Well, we did publish it, and I fear you can expect your dose of grief from the "RA boys." Thank you so much for the update from South Africa. It is indeed fascinating and it sounds like bulletin boards are booming there as well. It is striking that the online model has emerged so universally similar, from country to country and continent to continent, with bulletin boards thriving on the edge of the expense of commercial services, the arrogance of government programs, the popularity of networked mail, and so forth.

Similarly, the level of things shared in common among people connected by wire globally is a little charming. I think governments dependent on selling the concept of the Mongol Hordes gathering just over the horizon in order to motivate/manipulate their own popula-

tions is going to become a bit harder sell as the result of all this.

Jack Rickard

Mr. Rickard:

First off, what a tremendous resource BOARDWATCH Magazine has been. Before reading BOARDWATCH I was a puny 97lb. network surfer. Now, after months of the BOARDWATCH program I am a muscular, lean, mean e-mailing machine!

Seriously, I am trying to establish contacts with AFS students that have attended my school. For whatever reasons, regular mail is very inconsistent in going to or coming from Russia.

In recent issues there have been letters from a Gentleman from St. Petersburg, coincidentally, where two of the students live. I have misplaced the issues with his letters and e-mail address. Can you send me his e-mail address?

My purpose in contacting him would be to see if there is a way to open up communications between the AFS students and their parents, and between me and the AFS students who have just returned to their homes in St. Petersburg. Additionally I am hopeful that a network of some sort can be developed that would facilitate communication between AFS'ers and their host families, and 'regular' families. This would not be limited to just Russia as, at least here, we have AFS students from Turkey and Brazil.

Thanks in advance for your consideration of these comments.

Clear Skies...

Bob Riddle, Planetarium Director
Southwest Science/Math Magnet High School
6512 Wornall Rd.
Kansas City, MO. 64113
(816) 871-0900

Bob:

I too was a 97 lb netweakling. But now I'm a 230 lb net-hog wallowing in my chair and unable to get up to walk. The muscular, lean, mean period must have happened during a download or something.

It was in fact our May, 1993 issue where we carried a report from Arcady

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Khotin (agh@nwpc.spb.su) bringing us up to date on the state of networking in the Soviet Union. I'm sure he'd be pleased to hear from you. You might remind him to update us while you're at it.

Jack Rickard

Dear Boardwatch Mag,

I am a big fan of your Magazine, and the area I find most interesting is your section on BBS laws, Legally Online. I often use it as a source on my BBS for policy and to aid other SysOps in my area.

My Board, Friendly Fire (Will go public in August after ONEBBS CON) is a political debate board and a source for BBS law, Political Speeches, and other topics of political and BBS interest.

I used the policy published in the July version of your Magazine that was from Exec-PC on the topic of adult gifs to write a policy for this area on GIFS. My question is, would this be a copyright infringement of your magazine or of Exec-PC? I rewrote it in 'friendly' language, and gave you and Exec-PC as a source, but I thought the prudent thing to do would be to check with you.

Thanks for a great Mag,
M Wayne Stefiel, Friendly Fire BBS

Wayne:

We would probably consider it a copyright infringement, however friendly. But you should really check with the author, Greg Ryan, at EXEC-PC. His wishes are our wishes with regards to this specific article.

Political debate is warp and woof in the web of online life. You should do well. Since this issue will be our "ONE BBSCON Special Edition" such as it is, welcome to the convention.

Jack Rickard

Jack:

Your June issue was my first. I found it to be an invaluable resource.

I'll probably be suffering from information overload when the next issue comes out! I'm a contractor assistant

to a sysop on an Environmental Protection Agency BBS. Your magazine has already given me lots of information, ideas, and contacts. However I was distressed that our board, The Office of Air Quality Planning and Standards Technology Transfer Network, wasn't included in your list of government BBS's. The TTN is a 64 line TBBS based system which contains fourteen individual BBS's covering topics from the Clean Air Act Amendments to Ambient Air Monitoring (the Ambient Monitoring Technical Information Center - AMTIC - is the BBS I am personally working on, with Joe Elkins as the EPA sysop). The TTN receives an average of eight thousand calls a month, and I would like to think we are one of the foremost on-line sources of information in the air pollution field. Give us a call at (919)541-5742 (8-N-1)!

Thanks Again for the Great Magazine!
Jeff Harris
TRC Environmental Corp.
jharris@cenc@epavax.rtpnc.epa.gov

Jeff:

I'm a little distressed about it myself since we did a story on the EPA system slightly over a year ago. I'll get it over it if you will, but thanks for calling it to our attention - with the details.

Jack Rickard

Hi, Jack,

Like a lot of letters I'm sure you receive, this one is more of a stream of consciousness than an organized missive of thoughts. But I have a couple of things to comment on -

In a recent issue, you were attempting to come up with some numbers of just how many modem-equipped computers there were. You went through a list of how many microprocessors Intel sold of various types over the years, and then casually wrote off a few million people by saying "let's assume all the PC's and XT's (8088/6's) are out of commission" or something of the sort.

Nope! In fact, I'm using an XT clone to write this very mail to you. I don't know how many XT clones are still operating, but it's a safe bet that more of them are telecommunicating than just about any other application short

of word processing. Most 8-10 MHz and above XTs can run fine even at 9600 baud, and it doesn't take a lot of horsepower to emulate a dumb terminal.

Heck, even the three online services that either require or push a front-end program can run on XTs. CompuServe Information Manager's DOS version (as far as I know), America Online's PC/AOL 1.5a (GeoWorks-based) and Prodigy's PC software all run just fine on XTs and clones. For the XTs that can't run PC/AOL due to only having CGA graphics and no hard drive, AOL offers its PC-Link front-end software.

No, I'm not gonna be one of those screamers that demand coverage of old-style computers. I know I'm on a relic, and don't expect the kind of attention that 386/486/Pentium/etc. users get these days...and I don't even want it. But telecomputing is one of the few pursuits in the computing world that doesn't require a power machine like a 486/66, and probably one of the few applications that an XT is good for in 1993.

If someone reading your magazine can pick up a used XT clone for a couple of hundred bucks or less, and they use it to get on a BBS, an online service or the Internet, and get enjoyment out of it... well, then I consider it a good service you've done. And maybe they will have an appetite whetted to move up to something "meatier", like the aforementioned 486 "power machine", if they like what they see.

Mike Ward
parth2@aol.com

Mike:

I don't think there is a thing in the world wrong with putting old hardware into play for communications. As you point out, even at 14.4 kbps, it is really overkill. If you can get an XT fitted up with a pretty good VGA monitor and a serial port with NS16550 UARTs to handle the speed, they work fabulously. Save the big iron for Mandelbrot Fractals.

I wasn't actually trying to denigrate old hardware at all. We try to come up with all sorts of numbers here at Boardwatch. It's a constant area of interest both for us and our readership. One of the reasons for this, unfortunate-

ly, is that there are a LOT of people out there generating numbers, and they tend to be unerringly bogus. Much of it goes beyond even the usual industry hype. I guess if you are going to generate some, it doesn't seem like you've done much unless they are "big" numbers. And unfortunately, that renders them more or less useless.

We tend to be conservative with our number generator. We generally throw out perfectly good chunks to intentionally err on the conservative side when in doubt. Faced with the task of estimating how many XT's are still in useful operation, as opposed to acting as land fill, closet fodder, or desktop ornamentation, we failed to produce a methodology. So we axed XT's as a tradeoff for keeping ALL AT class machines, many of which ALSO have been a long time between drinks from the wall socket. We are assuming the higher investment in dollars in '386 and '486 iron keeps them in the "active" column.

Jack Rickard

Dear Jack,

In reading your June '93 issue, you make an humorous (I believe) comment on the bottom of pg 14 about connecting to a vending machine in Omaha. In reading the nets, not too long ago I came across some posts by various University folks who had their pop machines wired into their university network, which *anyone* with an Internet IP connection could query to see how many cans of pop were left inside.

How true this actually is I'm not sure. But it's a scary thought that people around the world could find out how much pop I have left in my vending machine. :)

Yours is a good magazine. Keep up the good work!

Tim Kuehn
timk@tdkcs.waterloo.on.ca

Tim:

I saw some similar references. I found them a bit believable. Some of these Internet heads actually DO things like that. They had a bread toaster wired up to ethernet at an INTEROP a few years ago.

I don't think it poses much of a threat to our personal pop privacy myself. But if it is a matter of concern, you might consider developing a pop machine securi-

ty software package to see if there is a market for it. Who knows, there may ultimately be a global network of pop machines where industry executives can find out REALLY what brands are selling NOW.

Jack Rickard

Dear Jack,

I've recently received my third issue of Boardwatch and am very pleased with your publication. In fact, Boardwatch has opened up the world to me via modem. Thanks to Boardwatch, I'm a PC Pursuit subscriber and have become a member of over 30 boards around the country, at last count. I never cease to be amazed at the diversity of BBS configurations, graphics, commands, themes, and SYSOP attitudes and mentality. In my explorations, I've seen everything from "WELCOME! This is the BBS, I'm the SYSOP, enjoy!" to "Government officials, law enforcement officers and evangelists not welcome here" (and other, more "colorful" greetings which I dare not repeat). I still get a bit excited when I see the "CONNECT" message on my monitor.

There are two articles in your July issue which I felt were outstanding. "Dealing With Adult .GIF Images" by Greg Ryan contains good, sound advice and it is nice to see someone taking the lead in developing some uniform standards for SYSOPS in this area. Also, "Steve Jackson Games v. US Secret Service" by Peter D. Kennedy. After reading the outrageously fanatical rantings by others about this case and the issues involved, Mr. Kennedy's article was a breath of fresh air. A regular column written by Mr. Kennedy would be most appreciated by this subscriber.

Keep up the good work, I'll be looking forward to receiving my next issue of Boardwatch.

Sincerely,

Dave Tracy
71573.3105@compuserve.com

Dave:

Pleased to hear we are hitting the mark. Many times when topics grow beyond the bounds of normal hysteria, we've found it a good exercise to go back to the heart of the heat. I actually disagree most broadly with most of what Mr. Ryan wrote, but thought it would be

a valuable exercise to publish the thoughts of someone that has to LIVE with this issue in a big way and every day. He expressed their strategy at EXEC-PC quite succinctly, and I think to the benefit of the community.

Similarly, Mr. Kennedy was the lawyer who actually represented Steve Jackson in the case. He was actually my second choice for this piece. But when the judge in the case turned me down cold, Kennedy had to do. He did do a good job of it all the way through I thought. And who knows, the judge might have had a dyslexia problem.

Jack Rickard

Dear Mr. Rickard,

Sorry, but calling you "Jack" seems horribly presumptuous given that we have no actual acquaintance.

Your column in the August issue of Boardwatch, and the prolix comments of Ben Blumenberg criticizing education and the current crop of students have incited me to write, and the wonderful historical and literary scope of your comments in Boardwatch give me hope that you may find the following thoughts at least mildly amusing.

While the comments to the effect that much of the message base in the electronic community is garbage are true, the blame for the causes of that wasteland may be applied with a brush that is a little on the broad side. Remember that all of us currently using the electronic medium received essentially the same education, and that that education contained little or nothing relevant to using Email, yet we are quite capable of accomplishing what we wish within that medium. A fair conclusion one may draw from that evidence, then, is that formal education serves, as it always has, as a means of acquisition of the vocabulary of dealing with the world and of the excitement of learning. The public schools can and do accomplish this task quite well among those willing to listen to the teachers.

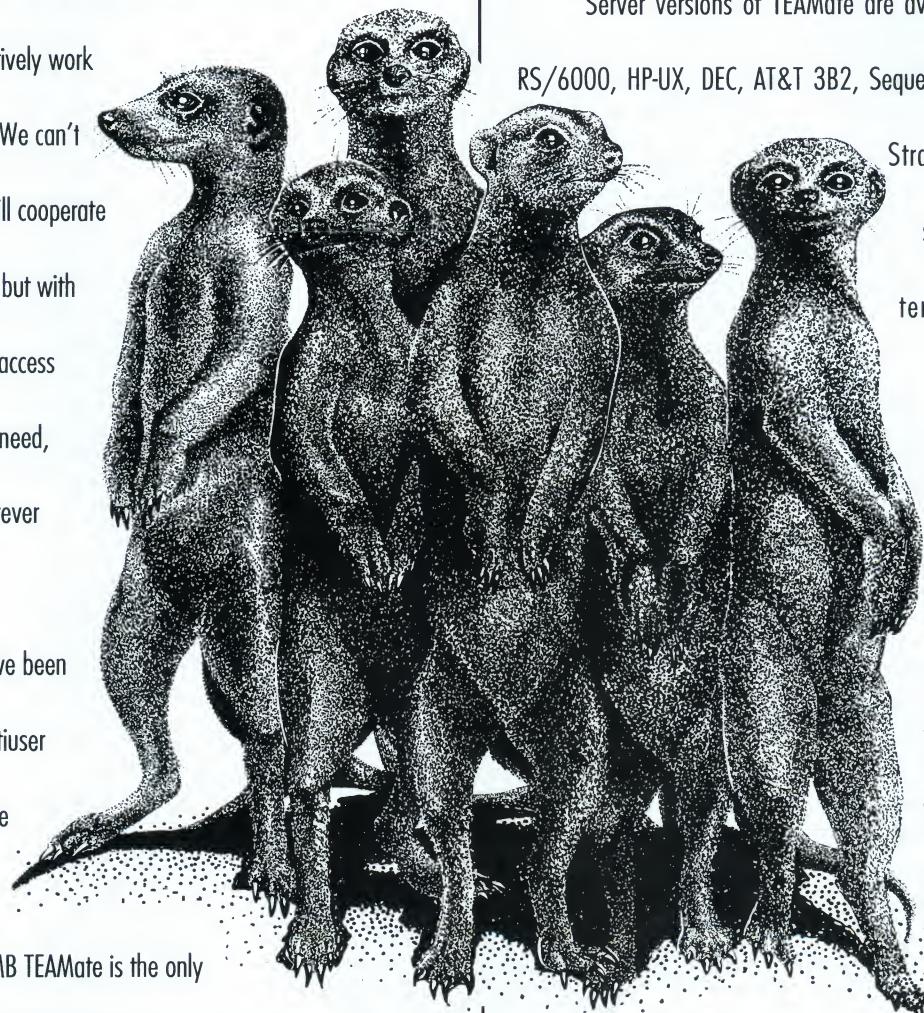
While the NEA is undeniably touting messages that a good many of us would rather not hear, having been married to a teacher for twenty years, I can assure you that the NEA does NOT speak for all teachers. In fact it may not speak even for the majority of them. Many of the defects in public education today are not the fault of the schools, but of the parents of the

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students in them. Many parents do not care to spend the time to read to their kids when the kids are little so that they enter school with a love of reading, or to help their kids learn manners so that they can interact well with others in school, or to help them explore all the exciting minutiae of the world around them so that they will learn the excitement of discovery. Having thus abandoned their responsibilities as parents, they demand that the schools adopt an ever greater role as the parents' surrogate while also demanding that the schools perform these additional tasks without any more tax revenue and in a politically correct manner; all while not interfering with their children's "space"! Having failed either to discipline their children or to teach them self-discipline (and I speak from the experience of listening to teachers' "war stories" here), parents become outraged at both teachers' attempts to apply the discipline necessary to provide an environment for learning and any lack of such attempts they perceive.

The public media constantly poke fun at learning: "sitcoms" portray anyone who has any education as a nerd, knowledge of mathematics or the ability to use English effectively means you are a geek, and knowledge has no intrinsic or extrinsic value. As we raise the current generation of "idiots", we can hardly blame the schools for failing to exert enough influence to overcome the message in which we all swim daily that one can not display an interest in any subject other than sex or football without screaming to the world "I am a dork" by doing so.

Our society considers money to be the ultimate reward for displaying the characteristics the society values most, so let's take a look at who makes the most money, and by implication, who displays the most value to our society. So, who tops the list? Actors, rock musicians, and sports figures have more money than God, constantly brag on television talk shows about how they are ignorant and "dumb proud of it!", and have never needed any education to make all that money. People who can hardly talk consider that society's accolades of showers of money make them experts on all kinds of social and psychological issues, and reinforce the message to the "idiot" generation that paying attention in school is a total waste of time. And you (and Mr. Blumenberg)

then want to blame the shortcomings of public education on teachers? Given all these factors, I find the fact that public education functions AT ALL nothing short of miraculous!

Before we throw out the baby with the bath water, we ought to consider that the public school system, besides the obvious functions, also provides a great equalizing system; in that most of the population of the United States shares common experiences: sitting at those little desks with "Mary Sue loves Bobby" carved into them, having your tongue stick to those little wooden "spoons" while eating ice cream from little cups, being chased by the playground bully, and generally having to deal with people with whom one would rather not associate.

These experiences provide a common fabric that ties us all together in the warp and woof of its weave, and help to keep us headed in something of a common direction as we travel through life. Take these shared experiences away, and you leave us with the situation outlined most clearly in countries like the former Yugoslavia; in which the lack of shared experience and common referents causes the total destruction of both society and culture.

And so, having become quite prolix myself, I conclude by suggesting that we ought to recognize that our education system has performed miracles in both providing a culture that allows us to enjoy freedoms and a standard of living unlike any mankind has ever seen, and a basis to expand those freedoms and living standards in directions we can only imagine. Let's stop dumping the blame for all our problems on teachers and place it where it really belongs: on ourselves, for not accepting our responsibilities as parents and for spending too many Sundays, doing carrot imitations, beer in hand on the sofa, while a bunch of highly-paid illiterates perform ritualized combat in the best tradition of the Roman circuses on the tube. Instead of just bitching about the problems we perceive in the public schools, let's get together and shoulder the responsibility of fixing them. After all, we have an infrastructure investment there of billions of dollars, and we can ill afford to pay the social and economic costs of throwing the whole system out and starting over from scratch.

On a separate, but related, topic, one of the failed hopes of the BBS world in my view is the promise of forums for conversations on topics such as the one above. Search as I may, I have been unable to find a place where such discussions are going on. As the BBS world promises to be the medium of choice for communication in the future, I submit that we need to develop places for such conversations. Both your editorials and the letters your readers write show a pent up demand for such a forum, yet we have not provided an outlet for this demand.

I would be delighted to hear you comments on either or both of these subjects.

Nigel Mends
Compuserve 71174, 2523

Nigel:

Ok. I'll buy it. But I want some pretty big things in return. FIRST, if there are any inaccuracies in this issue of Boardwatch, we will agree they are the READERS fault. Secondly, any color anomalies are the printers fault. If any of the pages are out of order, it's Gary's fault. If I say something stupid, it's YOUR fault. And if you don't get this issue at all, for whatever reason of non-delivery, it's your wife's fault. Or perhaps Clinton's fault.

In the REAL world I live in Mr. Mends, anything in Boardwatch that isn't up to snuff really is MY responsibility. This is total, unrelenting, unforgiving, merciless, and I not only accept it, I approve of the whole system. If you don't get your issue, call me. I replace it at MY expense and with all due haste we can muster. I live in a world where it is a PRIVILEGE to be read and the highest compliment in the world to be paid for - in mailboxes across 60 countries that GROAN under the weight of things waiting to be read. But it is a curiously unforgiving industry. If I fail, the world simply turns away to other things and I am forgotten in a universe of 26,000 periodical publications.

Teachers, by contrast, have complained bitterly of lack of money, while funding for the education of our children has TRIPLED to some \$6500 per student per year. Now, the story is that parents are unfeeling, uncaring, uncommitted monsters who did a fun thing in a jacuzzi somewhere, stopped by the hospital 3/4 of a year later, and

then dumped the result on the school house steps on the way to their next Perrier party. It's our society. It's our parents. It's the administrators. It's Supreme Court rulings. It's busing. In the letter you refer to, it was TV and junk food.

Nigel - what it is is heartbreakingly simple - no stones. There is no one in a profession employing millions of individuals in pretty good style and at a public expense of billions and billions of dollars with the strength of character, vision, or upbringing to say "I stand responsible for this, and I will fix it."

Until someone DOES say that, the various elements in the machine, the printer communications, dealing with the post office, adopting the latest page layout technology and getting it to work, selecting articles, graphics, researching technologies, dialing online services, retail distribution agreements - they don't matter, and they don't count. No one needs or wants to hear about it - they are excuses, not causes. They certainly aren't the reasons for failure. They don't matter for magazines, and tv, junk food, parents, society, the welfare state, buses, funding, student motivation, pressure groups, unions, societal decay, guns in the classroom - don't matter for education. These are structural elements of a process - not a result.

Eventually, if no one IN education does take responsibility, someone outside of it will. Three things come to my mind immediately. One - I CAN fix it. Two - you and almost everyone else IN the education field will be MUCH happier if I don't. And three, there are many out there who would be even less pleasant and considered about it than I would be.

Jack Rickard

To whom it may concern;

I'm not sure who to direct this to, so the title will have to do. I purchased a copy of your magazine last month, and read it cover-to-cover. It's been a long time since I've done that with any periodical. I decided to cast a vote for my favorite BBS. Much to my surprise, I received a copy of this month's edition in the mail today, and was thrilled. I've already read through it, and I'm looking forward to the next edition. I'm not sure why I received

anything, although it does mention that I voted in the contest on the shipping label. I've purchased other communications periodicals in the last few months as well as read Modem News on a local board here in Philly. Your magazine far exceeds anything else I've read, and is generously text-oriented, a real short coming of others, namely, Online Access. So I'd just like to post a note of thanks and appreciation to the culprit responsible, and also would like to add that I pass the magazine on to friends. It's real hard to find your magazine on any racks, and I'm limited to one book store, and if you're not one of the first to get it..then you miss the boat. Being disabled, I really appreciate the sometimes critical info. that you exhibit. To some, I guess that's not important, but for me, more times than not, this computer and modem is my mode of transportation.

Thanks again,
Sincerely;

Bill Hartzell
6046 Newtown Ave.
Phila., PA 19111
BILLSOVIET@AOL.COM

Bill:

Well, Nigel, there's the good side to being the "responsible" culprit.

Seriously, Mr. Hartzell, we're pleased we're hitting the mark in Philly. We are battling the retail distribution thing pretty hard. We win some, we lose some. Basically, if we tell stores they will need more Boardwatch because we're good and they will sell out in four days, they are a bit skeptical, probably understandably enough. But we are winning one store at a time. Typically, they have to deal with dozens and in some cases hundreds of titles. Our newsstand performance falls a little out of their "typical magazine" range.

We mail Boardwatch to selected "ballot-ers" in our contest in a crafty effort to enlist the post office in our validation process. Works pretty well actually. And if you took the time to vote, you deserve a copy. The way the world works, almost every time, is that the harder you try to give it away, the more it comes back. I keep having to learn that part for some reason. We really did intend it as a "thank you" for those voting, and we probably get as many subscriptions back as a result of this as

anything we do. If I can ever figure out what it is we're doing right, I promise we'll do a LOT more of it.

Jack Rickard

Jack:

I enjoy being a subscriber to your publication and think it is a great resource for information about the online community. My reason for this letter is to complain about is the "Marlboro" stories you have run in two recent issues.

Marlboro sells cigarettes. In order to get more recognition of their brand name, they sponsor events like the racing. This allows them to use familiarity and association techniques to later sell those fine tobacco products once you are in your local store.

Why keep mentioning Marlboro in your publication and even printing their logo (twice in the picture from the August issue)? This is yet another ad from this company, and will help to sell cigarettes (whether you intend it to or not).

Unless, of course, Phillip Morris is PAYING you to run these photos.

Roy Batchelor
Burn This Flag BBS
San Jose, California
roy@burnflag.ati.com

Roy:

Sometimes I'm sure I MUST have just hauled in on the Pumpkin wagon. There is so MUCH about this world I don't have a clue how it works or how it got so hosed before my arrival.

First, what's wrong with Marlboro, what's wrong with them selling cigarettes, why should I care whether they do or don't, and most curiously, why should you?

Marlboro isn't paying ME to run these photos, I'm paying THEM. Or at least Jim Thompson, who's done a bangup job with a series of articles on "graphics online." In case you were out of the country, this is a hot area of interest online. This is a perniciously technical area that is developing widely and narrowly on dozens of fronts at once. I'm inadequate to the task of doing it well.

Mr. Thompson runs Marlboro Racing

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News, a BBS with a somewhat unique mission to take photos of automobile races, and put them up on a BBS in a matter of minutes for about 400 journalists around the world who download them and put them in their newspapers. These people need an easy graphic interface - and photos. This rather puts the onus on Mr. Thompson to stay at the edge of this technology, and the funding to do it to whatever degree it can technologically be done. But his main line of business is running Western News Service - and writing. So I found someone who CAN write, AND has a vested interest in keeping up with this graphics technology, AND a heck of a nice guy, AND willing to help me with this. And as I understand it, YOU DON'T LIKE HIS HAT!

And I don't even understand the first part of WHY you don't like his hat. Marlboro is a company. They sell cigarettes, they sponsor a Marlboro automotive racing team (doing pretty well this season actually), and apparently they make a baseball cap for Jim. If you are implying that by a terribly complex ruse, they have plotted and planned to get this in Boardwatch, I'm flattered, but confused. If you are worried they will sell more cigarettes, I hope they do. If you just wanted to write a letter, the hot topics now are education, the Internet, and Amiga abuse.

As it so happens, I smoke about two packs of Pall Mall's a day - they're made by American Tobacco Company and can be found "Wherever Particular People Congregate." I hope they sell an extra truckload or two as well - to kids, environmentalists, and educators.

Hey Roy - GET A LIFE! A smoke-free one if you like, BUT A LIFE.

Jack Rickard

Dear Mr. Rickard and Mr. Gram-Reefer,

This is just a quick note to thank you for the kind words you printed about my classroom in the August issue of Boardwatch. I truly believe that people outside of the Education field should know about the good things kids do in the classroom. By printing an article about my class, you have spread the message that kids can do productive and meaningful projects in the classroom if/when given the right tools.

Is it possible that the people at KidLink/Kidcafe can post the article in

their library??? They will give proper credit to Mr. Gram-Reefer and Boardwatch.

Again, thanks for the kind words.

Sincerely,

Sheldon Smith
Atascadero Junior High School
6501 Lewis Ave.
Atascadero, California 93422 USA
805.466.2417 (voice)
shsmit@eis.calstate.edu

Sheldon:

Even a blind hog gets an acorn now and again. Hang in there.

Jack Rickard

Dear Jack:

Ok, I was reading the July 1993 "Letters to the Editor", and I saw someone highly praising ROBOboard...I seem to agree...It's much like the traditional RemoteAccess or SuperBBS, but with EGA/VGA graphics. Hudson Message Base & all... But, while computers are speedily upgrading, EGA/VGA/SVGA, 286/386/486, there are some (one of my best friends comes to mind) who run an 8088, one floppy not even 640k, putting along on a 2400 modem, plus a CGA monitor.

The question is, what to do with the users not supported by the RoboTerm VGA interface? The answer, either run 2 bbs's (which I did for a while), or dump RoboBoard! No real SysOp, serving the community, can alienate all CGA users!

The Answer: Go RIP or NAPLPS. I support RIP, only because both Renegade and Synchronet (The 2 best softwares on the market at this time, in my opinion) support RIP well. I hear NAPLPS is a nice graphics protocol, but it seems most major BBS programs (Wildcat, MajorBBS, and others...) have already made their decisions. Sorry NAPLPS people....

So, I think MajorBBS is doomed, until it can support the users without EGA or VGA. What'cha think?

Joshua Remus
SysOp The LightHouse BBS
1:2340/130@FidoNet.org
ae185@freenet.hsc.colorado.edu
St. Joseph, Michigan

Josh:

I think you are one very confused person, and take it as a personal failure that we haven't explained this better in Boardwatch.

First, major BBS programs make "their decisions" every day and tomorrow they get to make them again. Those that don't fall by the way and leave it to others willing to innovate every time they finish breakfast. Nothing is "done" in this industry.

Second, MajorBBS has nothing to do with NAPLPS, in fact they are one of the heartiest proponents of RIP, which you apparently like because it doesn't abandon CGA. Actually, RIP is solely EGA and this hardware dependence is the most broken thing about it, while NAPLPS does offer some true hardware independence.

Finally, I think if any "true sysop serving the community" did alienate all the CGA users, I don't think anyone would notice.

Jack Rickard

Hi Jack,

Read your recent article on demos in Boardwatch. What a timely (coincidental) thing — I recently tried out a couple demos on a friend's machine that happens to be equipped with SVGA and a SoundBlaster.

I can guarantee as much as you enjoyed viewing the demos on a computer with the PC speaker, the experience is ten times as intense once you have a SB hooked up. One demo was all it took to convince me that I had to get this sound board for my next computer (which I am buying this weekend). Anyway, for the hundred bucks, you should treat yourself to a SB. I'm not being paid to say this or anything, but the combination of slick graphics, amazing sound, and a little good programming yields a REALLY excellent experience. Dim the house lights, crank up the speakers, and you've got yourself a tremendous show.

Good luck & as usual, great mag.

Pete Zurich
1:2604/201
p-zurich@uiuc.edu

Pete:

I think something like "demos" or "intros" will finally get sound cards off the ground in a big way, and get them universally installed. We had some amazing response to the article on demos and plan a followup for an issue soon. John Smith of Gravis sent us CRYSTAL DREAM II demo with one of his superb Gravis sound cards and yeah, we're a little wowed. Crystal Dream demo, by Triton, was reviewed in our August issue. We have it on the Boardwatch BBS now as CD1.ZIP and the Crystal Dream II demo as CD2.ZIP. We think this is an emerging new art form, and we predict big things for this stuff in the future. If you haven't seen these, grab them and run them now, before they mature and get really interesting.

Jack Rickard

TO: jack.rickard@boardwatch.com

I just finished reading your editorial in August Boardwatch. I read the first two pages and agreed with everything you said — in fact at the bottom of the second page I decided to write to ask you if I could quote it to some of the educational bureaucrats I deal with. Then I came to your paragraph on the third page:

> One reader actually sent us a flyer from a Maine educational BBS that had
> Consumed some **\$180,000** in grant money used to operate a single line
> Macintosh BBS with 2400 bps modem and no graphics and had had **OVER 400**
> CALLERS log onto the system during the period. Be still my heart.

Waal, shucks ...

(1) We're a disabilities board, not an educational board.

(2) The **\$180,000** is totally bogus — we budgeted **\$60,000** for the first year, of which a great deal went to the telephone company for 800 access (required by our funders) and some of the rest went to purchase a bulk lot of old Viewtron Sceptres to pass out to consumers.

(3) It was a multiline system running TBBS 2.2M16 and using v.32bis modems.

(4) We defaulted ANSI to OFF in deference to the many users who were logging on for the first time ever using Sceptres — but ANSI was available for anyone who wanted to go turn it on.

The reader who sent you the misinformation is a frustrated shrink who got his nose out of joint because he tried to sell access to his private board to the Department of Mental Health and Mental Retardation, and they turned him down flat. He's been targeting our operation ever since, and no matter how often we publish the truth, he always pops up somewhere else with his fiction.

I realize that it's unreasonable to expect you to check the truth of statements like his — one of the unsolved issues of the new electronic age, after all, is how to winnow out the deliberate misinformation — but I wish, just a little bit, that you'd refrained from echoing it to the electronic world.

If PIMP v.2.19 will really handle enclosed files, I will send along a zipfile (packed with 1.01, sorry!) containing some additional messages on the topic which you might find enlightening. They're part of an exchange of messages between me and our mutual acquaintance on the topic of his misstatements.

The rest of your editorial is so exactly on target that I'd still like permission to repeat it — maybe read it in a **VERY LOUD VOICE** — to the public-policy types here who still think the sun rises and sets on GTE SpecialNet. That's one of the reasons we bought PIMP and got a domain name — not because we aspired to become those people's carrier (after all, there are plenty of private operations who can do that job and make a legitimate profit at it) but because we just want to get it through their heads that such a thing exists. The day we see that they've really gotten the message — and have got off their control trips — we'll go quietly away, and the public coffers will be safe again for the next generation. Until that time, we're darn proud of what we've done and we're going to keep doing it — as long as you and Phil Becker continue to do your respective parts.

Sincerely,

Lou McIntosh
Sysop, Maine Meeting Place

Lou:

Thanks for one of the most entertaining confessions I've read in a long while. We've all thoroughly enjoyed it. Yes, PIMP does do file attachments and I did get yours. The war with your frustrated shrink friend is hysterical, but irrelevant. And I'm afraid you're going to find this embarrassing.

*Actually, we DO make mistakes. This just wasn't one of them. I do generally make an effort to get the "facts" straight. There is a reason why we got them a little hosed in your case. As you point out, YOUR grant was **\$60,000**, not **\$180,000**, you run a multiline TBBS system - not a single line Macintosh, you run V.32bis modems, not 2400 bps, in short - what, aside from some sort of "grant guilt", made you think we were talking about YOUR BBS?*

Amazingly, we also received two other letters with basically the same theme - neither so hysterically self-confessing as yours - but both taking umbrage at our characterization of their system. Since there are only 60 or so bulletin boards in the whole state of Maine, I think we've unearthed the latest trend - grant scams with sysops suffering the pangs of guilt for accepting thousands of dollars of public money to do what they know can be done for pennies. We did NOT hear from the sysop of the system we actually mentioned, which we did not mention by name, but just noted it's description as you have quoted.

*For what it's worth, I think a multiline V.32bis system at **\$60,000** is a MUCH better deal for the taxpayer than a single line 2400 bps Macintosh system for **\$180,000**, even if it is for disabilities rather than education.*

But - thanks for writing.

Jack Rickard

Jack,

Immediately after receiving the Boardwatch with the PageSat article in it, Sean, the sysop of Data World BBS in Knoxville (Public 615-675-4753, private 615-675-3282) purchased the system. After installing it we found that there is no real standard way of integrating 4,000 news groups into PCBOARD. We looked at putting them into conferences, but

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decided not to as that seemed to required huge amounts of maintenance time, almost continuous message packs, and a 300 meg USERS.IDX file for us.

Instead we decided to use the Waffle utilities for importing. We are using the ZNEWS door for user access to the newsgroups, and for private mail capability. There was no on-line reader available for viewing news articles that we found to our liking, so I wrote one, called USENET. It allows a user to view the Usenet news, all 4000 groups, and uses exactly the same hierarchy as the newsgroups themselves use. Selection is done via cursor keys. This software is available both from Data World, as well as Salt Air BBS. It can be used on Data World by typing USENET at the main board prompt. The setup seems to be well liked by our users.

The mail insertion is handled by Waffle's RNEWS utility, which is called when a bag is ready by Jack Kilday's PageNews program (jklday@nlbbs.com). This program allows us to run a batch file after each bag is inserted, and the batch file checks disk space and runs expire whenever the news drive has less than 20 meg remaining on it. The only disadvantage we have found to the setup is that Waffle makes each newsgroup a subdirectory, and each news item is a file. With files of approximatley 1k each, residing in clusters of 8k each, the news drive becomes very inefficient unless Stacker or similar is used.

The PageSat system installed easily. The only problem we had initially was that the horn was mounted 90 degrees from what was needed, and we could not receive any signal until it was rotated. Here in Eastern Tennessee the humidity and clouds are a problem. We receive quite a few garbled mail bags every day and it is not unusual during heavy cloud cover to lose the feed for hours at a time. We have been working with PageSat, re-aligned the dish, and installed an in-line amplifier, but all to no avail. PageSat is sending us a .75 meter dish to replace the 18" dish, and I feel certain that will fix the problems. Garbled mail bags can be a significant problem as RNEWS will sometimes lock up or give a QEMM exception error. It also tends to export any news with a garbled header back to the Internet with a new and totally wrong header.

I appreciate the Interenet articles in Boardwatch. At first it was all Greek to me, but I can see it is rapidly becoming the way things are going. Keep up the good work!

Marshall Dudley
dwbbbs!mdudley@nlbbs.com

Marshall:

Since our June article, we have received numerous reports of garbled data, weather problems, and so forth with PageSat. We tried to contact PageSat several times to do a followup and some detailed testing, but they won't even return our calls - a fairly unusual response from someone we've put on the cover of Boardwatch. Oh, well....

One of the many things I like about the online world is the grassroots driver behind all of it. If something doesn't work the way you want it to, you just by Jimminy go write something different to make it do what you want. It's a story repeated a dozen times a day, and some of these solutions cause companies and industries, and...oh... I get all misty just thinking about it.

For those who are new to the game, Marshall Dudley is the author of DOOR-WAY, an early program to let anyone write a program and run it as a door on a BBS. It eventually emerged as a full-featured remote access program and one of the most fascinating and flexible tools used for communicating in BBSland.

Thanks for updating us on your latest work. As you know, we think the Internet connection for bulletin boards is a pregnant one. We need all the tools we can get.

Jack Rickard

Bill,

I completely forgot! Here's something you may, or may not want to mention. In the July 1993 issue of BoardWatch, the cover story dealt with how one could grab Space Shuttle photos over the Internet. Here's a relatively painless way to do that using a Mac which has MacTCP and NCSA/Telnet v2.5. Following the article's advice, one telnets to sseop.jsc.nasa.gov. Then, assuming one has turned the Capture file on, you grab a listing of available images. You can proceed by enabling

FTP access from within NCSA/Telnet, which means that the two-step process outlined in the article becomes a single step for the well-connected Mac owner. I tried this out over the weekend and it worked and even worked pretty well. Due to the huge file sizes, it looks like the connection has hung until you realize that the hard drive is spinning furiously in the background all the while as your requested file is downloaded. When I finished grabbing a couple of these files, I used JPEG converter v1.0 (available for free from sumex-aim and posted on Spider Island) to interpret the Targa files and batch-convert them into JPEG files. Then I used JPEG View v2.0 to preview the files and used the "Save as..." option to automatically generate those nifty previews that TeleFinder v3.1 can now display on screen.

Keep in mind that I am lost when it comes to graphics programs! If I knew how to operate PhotoShop I would, no doubt, have some rather spectacular files. As it is, I have some very nice images and some which are really stunning. I was a happy, if somewhat exhausted, camper by the end of the night.

- Eric Hoffmann
CCS bbs

Jack:

My August edition of BoardWatch Magazine arrived. Delighted in your editorial titled "The Emancipation Constipation of Electronic Mail." I have a few observations:

I agree with your thesis that the local BBS will be the average user's connection to Internet/USENET (BTW, what is a "backplane"?). As you state, local BBSs are "cheap" and people already know how to use them.

Your thinking on this subject is innovative. In the 1990 edition of Dvorak's Guide to Telecommunications the WELL (p178) is described as One of the few[!] places where any individual with a computer and modem can become a terminal in this huge international network [UUCP and USENET] that connects universities, businesses, and research institutions."

However, for your vision to become a reality, several difficulties must be overcome. One difficulty in particular is the present QWK mail format.

As you state, if we are to have Internet/USENET on local BBSs (probably using a UUCP-type connection), offline mail readers are *critical*. I subscribe to a local BBS (Cloud Nine BBS) which carries more than 2,500 USENET conferences (plus fidonet, etc). On average, using the QWK mail format, I download a paltry 300 messages a day (this takes less than 5 minutes on my 14.4 bps modem). If I were a "conference junky" I could easily download over 1,000 messages a day. Reading and occasionally responding to these messages would be impractical without an offline mail reader (its sorts my conference mail by "threads" and permits me to place obnoxious writers on a "kill" list). Yet the QWK mail format is not completely compatible with the Internet/USENET offline format (my reading tells me that Internet offline mail uses RFC1036/RFC822). For example, the subject field of most USENET messages is truncated by QWK. Furthermore, QWK does not provide enough space in the "TO:" field for the complete Internet "at-sign syntax" address. This limitation looks increasingly regressive now that PCBoard version 15.0 has increased the size of the address fields. In sum, the present QWK format is restricting the ability of most local BBS to bring Internet/USENET to the masses.

I know that other people have developed proprietary formats (for example, BlueWave and Rosemail) that overcome the shortcomings of the QWK format. However, we need a standard that everyone can take advantage of.

I am a strong fan of offline readers for another reason. It encourages people to edit and spell-check their messages before sending. Messages become more concise and thoughtful. The time delay of offline mail provides a check to impulsive "flame-mail."

The *critical* nature of QWK is not appreciated by everyone. Approximately a year ago, I recall discussing the need for TBBS to have an offline mail capability. I was told there was few requests for this feature. The last I looked, the TBBS offline reader was still not compatible with PKWare ZIP version 2.04g because upgrading the software was a low priority.

I believe the BBS community needs to get together and agree on a new standard for offline mail (QW2?) that's compatible with Internet and meets

future needs. This community has moved quickly in the past when properly focused. I still recall how quickly the BBS community changed "en masse" from the ARC to the ZIP file compression format.

Perhaps *you* could get the BBS community to make a new offline mail format a *priority* at the One BBSCON convention August 25-29. A new format would remove one roadblock on the journey of bringing Internet to the local BBS user.

Sincerely

John Vindekilde.

John:

And you WANT WHAT YOU WANT WHEN YOU WANT IT - RIGHT?

I couldn't agree with your comments more John - frontwards and backwards. And I think you'll find Sparky Herring, the original author of QWK, in agreement as well. But the world is in a process of making - it isn't over yet. QWK was designed to do a small thing, and has been rode hard and put away wet. Sparky nor anyone else ever imagined all that would be asked of QWK. It's not a young standard. And now it is everywhere and has a bit of a life of its own. If anyone can change that, it would be Sparky, but I imagine he's wondering at this point if even HE can change a world gone QWK mad.

But yes, Mr. Herring has a session at ONE BBSCON, prominently featured. We stand ready to extend that with working meetings. I expect a QWK II will be announced or come out of it, and I would predict one of the main elements will be more facility with RFC-822 style Internet messages.

Cross your legs...

Jack Rickard

Howdy!

First a quick line to say how much I enjoy your Boardwatch magazine.. definitely the best source for bbs news and views!

Now, on to the juicy part.. in reference to an article appearing in the June '93 issue concerning the new RIP graphics protocol I'd like to mention there is a new freeware RIP drawing program

out there (DPAIN11.ARJ) which may fit the bill for all those sysops out there who otherwise can't afford to pay for the Telegraphix paint program (\$200! Ouch!)... of course, the features are spartan but it will get anyone started in the right direction.

Second, a statement was made in the same article re: Imagen's Fracterm product being the only current interface supporting photo-realistic images online... this is no longer true! Shawn Rhoads of TurBoard fame (PC Atlanta 1-404-395-6327 14.4k) has released a GIF2NAP GIF to NAPLPS conversion utility that will convert GIFS from 2 to 256-colors to NAPLPS with NO loss of resolution! Its quick, easy to use, with a mouse interface (for selecting any portion of the GIF for conversion) and the resulting NAPLPS frames may be viewed with either TurShow or displayed online any TurBoard bbs v1.20 or above.. a truly wondrous and remarkable advance, allowing any sysop to create and display photo-realistic images online his/her TurBoard bbs.

BTW- both utilities are available for d/l online Shawn's bbs.

Cheers, and keep up the good work with Boardwatch!

David Gridley
1:2613/313
Rochester, New York

TELEBITS

AT&T is introducing a new feature on their long distance service they call TrueVoice. It dramatically improves the sound quality of voice conversations and may in fact improve data transmission as well. The feature is not an option, but will be automatically added to all AT&T long distance switches. The upgrade will begin in September of 1993.

The technology, originally developed by Bell Labs, increases bass response and also increases total audio volume through the switch across the bandwidth. The result is much more realistic sound for voice conversations. The company currently has a demo line up at (800)932-2000 where you can listen to Tom Sellack (Magnum) ooze an unctuous line of AT&T spiel with the

old, moldy technology, (press 1), or the new, improved, high-speed trick double throw me down TrueVoice (press 2). The demo is pretty impressive, despite our personal preference for Higgins voice. You can also press 0 at the end of the demo to connect directly to an AT&T service rep to have your long distance service changed for free right then. Actually, it sounds pretty hot to us. But note that we have not as yet actually tested modems on this new service.

An interesting bit of legislation has been introduced in both houses of Congress. Titled the SPACE ADVERTISING PROHIBITION ACT, it denies launch licenses for space billboards, bans import of products advertised on space billboards, and asks the President to seek an international agreement banning space advertising. The legislation comes out of plans to put a mile-long inflatable billboard with lit messages in orbit around earth - which could substantially change the ambiance of that starry, starry night.

ALSO on the legislative front, Senators Danforth and Inouye introduced the Telecommunications Infrastructure Act of 1993 as Senate Bill 1086 on July 14th. This may be the most seminal piece of legislation regarding telecommunications introduced since the 1930's. The Senate Communications Subcommittee is now in the process of thrashing it out, but the heart of the bill would ELIMINATE the legal monopoly currently enjoyed by local telephone companies in local telephone service. It would allow ANY communications provider to offer local telephone service. As part of the buyoff there, it would also allow local telcos into the cable TV business.

The bill contains many provisions revolving around interconnection obligations (everyone has to), telephone number portability (you can change phone services and keep your old telephone number) and a lot of thrashing about rural and non-competitive markets in an effort to retain the current "universal service" philosophy. While this bill has some problems and is unlikely to get through the telco/cable lobby meat grinder unscathed, at its heart it incorporates almost completely the position published in a Boardwatch editorial in 1988 asserting that every man with a battered pickup and a rusty pair of pliers be allowed to offer local telephone service.

A lot of things COULD come out of passage of this bill. First, local telephone companies would finally be able to offer cable tv to the home, a market they never will make any money at but which they have lusted after in their heart for years. This always was going to be the ONLY way fiber to the home will ever happen. It is quite likely that you will have glass to your house late Tuesday of the week after this bill goes into effect. The local telcos are that wired on the concept of being in the cable business.

Windows NT appears imminent. Some of the last minute additions would seem to be a bone to the communications world - most notably an FTP SERVER and expanded TCP/IP features. With pre-emptive multitasking, strong LAN server functions, and good Internet features, this smells like a good platform for online services.

But OS/2 isn't giving up. The best kept secret in the industry right now, and I mean virtually a secret, is IBM's TCP/IP for OS/2. OS/2 2.1 appears to be a working platform, with good serial port support. The TCP/IP connection here seems like a pretty full bag - SLIP included. Something is going to break here either late this year or early next with a BBS package designed to take advantage of all this. Most likely guess - Andrew Milner's Remote Access. RA is very popular in many countries, quite flexible, and they are looking for life as a commercial package. Windows NT or OS/2 would give them the multi-line part they need, and some good TCP/IP Internet functionality would give them the WOW feature they need to break out of shareware and become a viable option.

WORST TECHNICAL MANUAL CONTEST

Any technical support person can tell you that at least 90% of all support calls are covered by RTFM - loosely translated this means the customer probably could have found just what they needed had they bothered to look in the manual. And any software customer can also note another truism - the manual isn't any good.

If both of these are true - the information is in the manual, and the customer can't find it, the product documentation isn't entirely doing its job. Some do, and some really don't.

The Communication Circle, a group of technical writers led by Jonathan Price, author of "Put That in Writing" (Viking Press), is sponsoring a competition titled "The Worst Manual of the Year." The contest is directed at shaming product vendors into improving their documentation. You may submit a manual, with a letter nominating it as the worst manual of the year. If your candidate places in the competition, you'll receive a T-shirt with "I fingered the Worst Manual of the Year, 1993" with an imprint of the cover of the winning (??) manual on it. You also get a copy of Price's book, and a certificate of honor in the war against useless manuals.

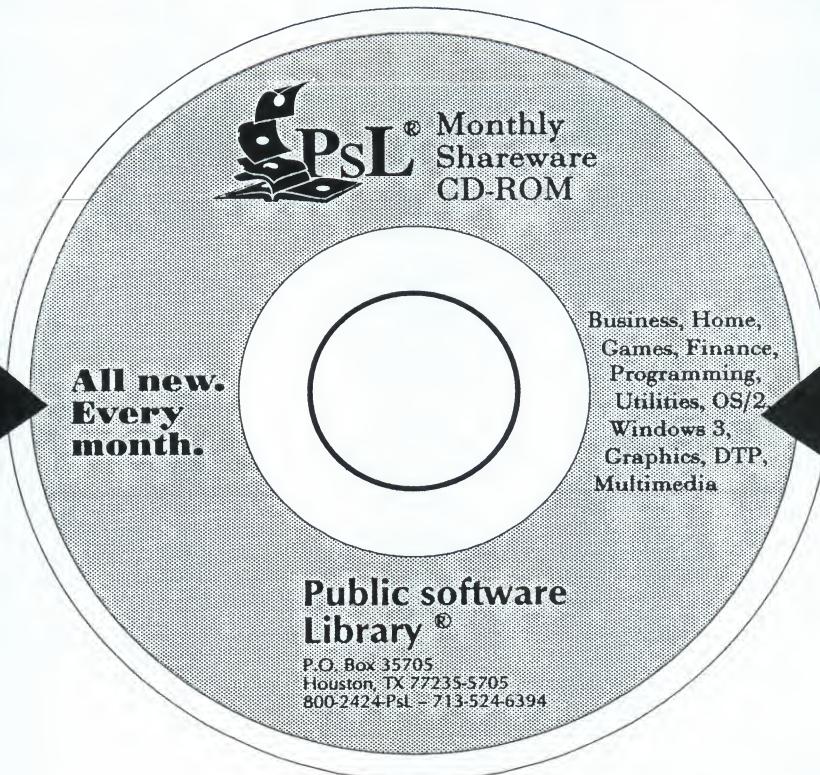
The winning vendor also gets a certificate - a garish Certificate of Bad Taste, along with a copy of Price's other book "How to Communicate Technical Information." To nominate a book, send a copy of it with a letter outlining your complaints to The Worst Manual of the Year, c/o The Communication Circle, 918 La Senda N.W., Albuquerque, NM 87107. The deadline is Holloween, 1993 and the winners will be announced on December 7, 1993. Inquiries can be directed to T. Outler at itso@hydra.unm.edu.

CD-ROM CONNECTION FOR NOVELL

Connecting a CD-ROM drive to a Novell server should be easy. Plug in a drive with an SCSI controller, and make happy. Those who try this find they have just entered a new world of "you can't get there from here - you have to go somewhere else first."

Microtest, Inc. of Phoenix Arizona has a new product that does simplify things a bit - for a price. Their new \$695 Discport product connects to the BNC or 10BaseT LAN wiring. About the size of a videocassette, it terminates in an SCSI cable that allows you to connect up to seven CD ROM drives. The server software supplied with it makes these CD-ROM drives look like any other published hard drive on a Novell Netware server, and may comprise one of the best and easiest solutions to putting CD-ROM drives on a Novell Network. Microtest, Inc., (602)952-6400.

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"Sysops are on the cutting edge of communications technology and we feel it is important to support them in the work of evangelizing and supporting high-speed communications," said John Wiley, president of Supra. "To achieve this goal, we've lowered the sysop pricing on our top-of-the-line modems while also adding some performance enhancements to the products."

These modems include the latest Rockwell chipsets and Supra's most recent firmware revisions to improve operation of the Supra - most notably improving high-speed operation on noisy lines. The new firmware also eliminates some isolated problems in connecting with other specific modem brands.

The units feature the 14,400 bps speed for both fax and data operations, V.42/42bis, and include Caller ID as a standard feature. If caller ID is available from the telecommunications provider, BBS operators can use it for such functions as automatic identification and logon of BBS users.

Qualified sysop orders are fulfilled in 24 hours. Ordering information is available in the online order area of the Supra BBS. The modems feature an unusually generous five year warranty. If users have a problem with a modem, for a \$20 fee Supra sends out a replacement modem and return mailer for the old one by overnight carrier to anywhere in the United States - virtually eliminating downtime. For sysops who have already purchased older SupraFAXModems, upgrades are provided free of charge as they become available. For more information, call Supra's BBS at (503)967-2444 or the sales voice line at (800)727-8772.



SupraFAXModem V.32bis External

HAYES OFFERS SPECIAL PRICING ON OPTIMA 144 + FAX 144 POCKET EDITION AT ONE BBSCON.

Hayes Microcomputer Products, Inc. will show its latest range of computer communications products for bulletin board users and sysops at ONE BBSCON (Colorado Springs, CO, 25-29 August). They will demonstrate V.Fast Class (V.FC) 28.8 kbps modem technology, Millennium 8000 Network System, Hayes ESP Communications Accelerator for Windows, and Smartcom for Windows communications software. Also on display will be Hayes ISDN products and award-winning modem products.

In addition, Dennis C. Hayes, President, will be speaking on his vision of ISDN on Saturday, 28 August, at 1:30 PM. Alan Clark, Hayes Vice President - Product and System Planning, will be participating on the Future of Modem Technology Roundtable on Friday, 27 August at 9:15 AM. Randy Cooper, Hayes Marketing Specialist will talk about scripting capabilities in Smartcom for Windows on Saturday, 28 August, at 9:15 AM.

"We are very excited about our expanded participation in this year's ONE BBSCON," said Dennis Hayes. "Our global Sysop Program, with its aggressive pricing and marketing activities, has reinforced our commitment to the sysop community."

For BBSCON attendees, Hayes will be offering special \$339 pricing on Hayes Smartmodem OPTIMA 144 + FAX 144 Pocket Edition, for both DOS and Macintosh computers. The estimated retail price of OPTIMA 144 + FAX 144 Pocket Edition is \$599. Hayes will also be holding drawings for 300 free copies of Smartcom for Windows for those attendees visiting Hayes booth. Hayes Microcomputer Products, Inc., PO Box 105203, Atlanta, GA 30348; (404)840-9200 voice; (404)441-1213 fax; (800)US HAYES - BBS.



Dennis C. Hayes

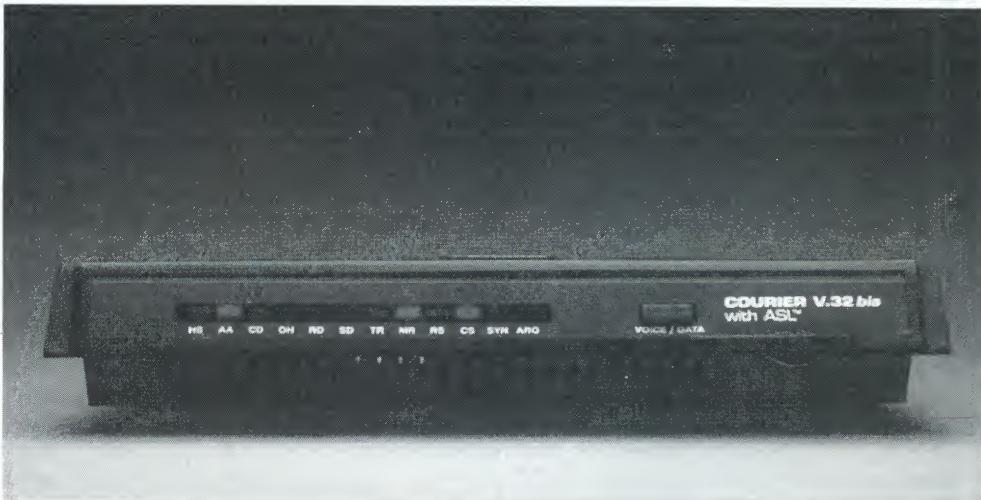
BBS MODEM DISCOUNT PROGRAMS

VENDOR	MODEL	LIST	SYSOP	BBS	VOICE	FAX
AT&T Paradyne	Dataport 14.4FAX	\$555	\$222	813-532-5254	813-530-2000	813-530-2398
AT&T Paradyne	Dataport 14.4	\$515	\$206	813-532-5254	813-530-2000	813-530-2398
ATI Technologies	9600 ETC-E	\$499	\$275	416-756-4591	416-756-0718	416-756-0720
Cardinal Technologies	9600V42 V.32	\$349	\$219	717-293-3074	717-293-3000	717-293-3104
Cardinal Technologies	14400V42 V.32bis	\$449	\$249	717-293-3074	717-293-3000	717-293-3104
Computer Peripherals	Viva 9624e V.32	\$349	\$249	805-499-9646	805-499-5751	805-498-8306
Digicom Systems	ScoutPlus V.32bis	\$289	\$158	408-262-1412	408-262-1277	408-262-1390
Digicom Systems	Scout V.32	\$259	\$155	408-262-1412	408-262-1277	408-262-1390
Digicom Systems	Connection 96+ V.32bis	\$199	\$139	408-262-1412	408-262-1277	408-262-1390
Galaxy Networks	UFO V.32bis	\$999	\$299	No BBS	818-998-7851	818-998-1758
GVC Technologies	FM-9696/144V V.32bis	\$689	\$413	201-579-2380	201-579-3630	201-579-2702
GVC Technologies	SM-96V V.32	\$599	\$329	201-579-2380	201-579-3630	201-579-2702
Hayes Microcomputer	Ultra 144 V.32bis	\$999	\$249	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	Optima 144+Fax	\$519	\$179	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	ISDN System Adapter	\$1199	\$450	404-446-6336	404-840-9200	404-449-0087
Image Communications	Twincomm 9600 V.32	\$299	\$279	No BBS	201-935-8880	201-935-6548
Intel Corporation	14.4EX V.32bis	\$549	\$269	503-645-6275	503-629-7000	503-228-9707
Intel Corporation	9600EX V.32	\$599	\$299	503-645-6275	503-629-7000	503-228-9707
Multi-Tech Systems	MT932BA V.32	\$869	\$435	612-785-9875	612-785-3500	612-785-9874
Multi-Tech Systems	MT1432BA V.32bis	\$899	\$450	612-785-9875	612-785-3500	612-785-9874
Practical Peripherals	PM14400FXSA V.32bis	\$549	\$250	805-496-4445	805-497-4774	805-374-7202
Practical Peripherals	PM14400FXMT V.32bis	\$399	\$200	805-496-4445	805-497-4774	805-374-7202
Quadralink Technologies	1496V+	\$360	\$320	416-538-9999	416-538-0101	416-538-1355
QuickComm	Sprit II V.32bis	\$249	\$220	408-956-1358	408-956-8236	408-956-1345
Supra Corporation	SupraFAX V.32bis	\$399	\$149	503-967-2444	503-967-2400	503-967-2401
Telebit Corporation	T3000 V.32bis	\$949	\$399	408-745-3861	408-734-4333	408-734-3333
Telebit Corporation	WorldBlazer	\$1049	\$429	408-745-3861	408-734-4333	408-734-3333
Telebit Corporation	QBlazer V.32bis	\$549	\$299	408-745-3861	408-734-4333	408-734-3333
U.S. Robotics	Courier DS V.32bis/Fax	\$1295	\$449	708-982-5092	708-982-5010	708-982-0823
U.S. Robotics	Courier V.32bis/Fax	\$695	\$299	708-982-5092	708-982-5010	708-982-0823
U.S. Robotics	Courier HST V.32bis/Fax	\$995	\$349	708-982-5092	708-982-5010	708-982-0823
Ven-Tel	EC96 V.32	\$699	\$439	408-922-0988	408-436-7400	408-436-7451
ZyXEL	U-1496 +V.32bis	\$989	\$549	714-693-0762	714-693-0804	714-693-0705
ZyXEL	U-1496E+V.32bis	\$649	\$399	714-693-0762	714-693-0804	714-693-0705

U.S. ROBOTICS OFFERS \$99 V.FAST 28.8KBPS UPGRADE THROUGH SEPTEMBER 30

U.S. Robotics, Inc. announced July 2 a **\$99** upgrade to the International Telecommunications Union (ITU - formerly CCITT) 28.8kbps V.Fast standard with the purchase of a Courier modem. The offer gives Courier customers a **\$200** discount of the list upgrade price of **\$299**.

The upgrades themselves will not be available until the ITU approves the 28.8 kbps recommendation - expected late this year or in early 1994.

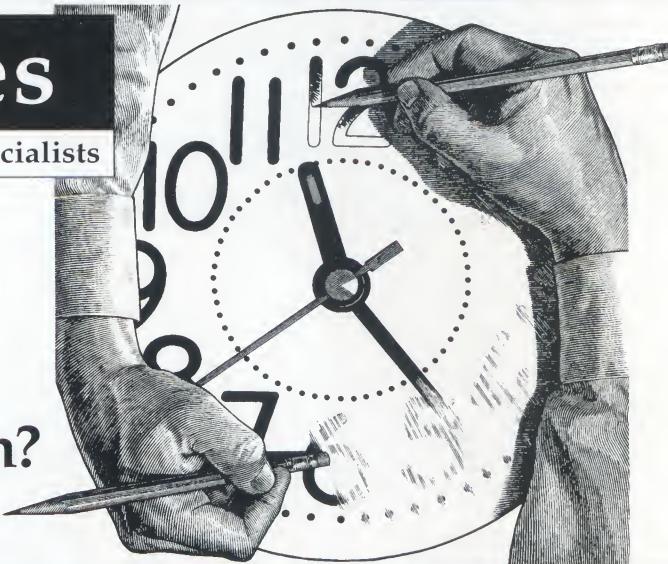


US Robotics Courier Dual Standard V.32bis

GW Associates

Communications and Information Systems Specialists

Are You Losing Time Setting Up Your Business On-Line Information System?



INSTALLING COMMERCIAL BBS SYSTEMS IS OUR ONLY BUSINESS

The Only Choice in Telecommunications

GW Associates was formed several years ago to promote and support the growing need for Information Management systems (BBS). Our goal has always been to make communications easier. We've always had the opinion that many seem to work very hard to make "telecommunications" some kind of mystery, a gray area where common man should never wander. And it really can be made simple. We'll be happy to show you how!

Muti-User Environments

Our ONLY business is telecommunications. We install commercial information management systems, we install telecommunications networks linking offices across the country using personal computers and inexpensive automated software. And we sell everything from single line TBBS software to 64 line "plug and play" packages.

Cost Effective

We remotely maintain commercial BBS systems. It's a good bet that you have never hired an employee to be a System Operator. And any time that an employee spends in the design and maintenance of a system is taking time away from the work that employee was hired to do! What happens when the employee is promoted, transfers or resigns? Can you afford to hire and train, or take another employee away from assigned tasks? We can support your TBBS system remotely at what might be a lower cost than what you will pay for an employee benefits package, and we won't demand paid vacations or coffee breaks.

Need Local Support?

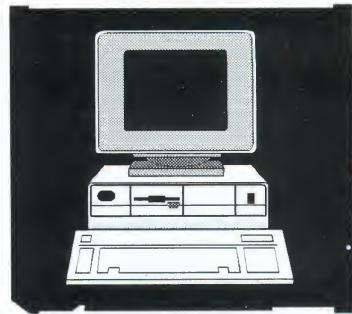
We have been building a matrix of associates around the world with the capability of installing and maintaining private and commercial TBBS/TDBS Bulletin Board Systems and that matrix is in place to help you in any way we can. If you would like someone to visit your site to do a full needs assessment or to help you with an existing TBBS/TDBS installation we will be happy to place you in contact with one of our associates nearby. And as all our associates work together as a team you can take advantage of their many years of accumulated experience with TBBS systems.

Call Today For More Information

If there's anything we can do to help you make better use of any communications tool, please ask. If you're not sure if you really have a need for a system and want to know more, please ask. We're here to help in any way we can. We hope you'll give us the opportunity to help. If you need information on prices or just need information on communications, don't hesitate to ask for help. We enjoy what we do and we'll enjoy discussing your applications and needs.

System Support / Custom Programming

There's a lot available for the TBBS/TDBS System Operator, as well as for anyone interested in an Information System (BBS). If you want to learn more about TBBS/TDBS just call our system and register as a customer. GW Associates offers full support to all System Operators and we now have 30 of the top TDBS programmers available to help with your applications and customizing of your system at a very reasonable cost. Please call our system at (508) 429-8385 (N,8,1) and keep up with our new releases or call us on our voice line at (508) 429-6227 if we can help you in any way. Installing and remotely supporting commercial systems is our ONLY business!



Call our Sales and Support BBS for full demonstrations of over 100 TBBS / TDBS add-on application, entertainment and utility programs.

TBBS / TDBS SYSTEM ENHANCEMENT SOFTWARE

Master File Manager (MFM)

MFM was designed to make it easier for your users to download files from both fixed disks and compact discs with little to no impact to your system. And with the new network interface MFM adds even more capability and flexibility to this well known and full featured program. Adding a multi-disc drive to your system is the most cost effective method of increasing your download library. Hundreds of TBBS SysOps now use MFM and have found it the most effective software available for handling compact discs in almost any configuration.

QuickSearch

The ultimate in text file search programs, QuickSearch is already proven itself to be the ideal tool for any customer or sales support system. QuickSearch easily creates an index of over 11,000 text files in up to 99 directories and allows a user to perform multiple boolean criteria searches to find matches and present them for display or download. It sounds simple, and it is! And it is unbelievably fast. This program is a must if you have a need for fast information retrieval. Easy to install and even easier to maintain, it can quickly put an end to repetitive questions and provide information to your users and customers quickly.

SystemMaster

SystemMaster allows COMPLETE and easy control of any TBBS/TDBS system. It features the ability to store and launch any TBBS command from a database of individual commands or from Program Groups which allow sequential execution of specific commands that YOU group together. You can even sort the commands or time their execution speed. It has Context sensitive help which automatically pops-up in a window whenever you add or edit a TBBS command, it provides a complete suite of easy to use SYSOP and DOS commands and facilities far beyond what you've ever seen before in a TBBS/TDBS, it provides a COMPLETE TDBS control area which allows you to create, modify, pack, zap, search and edit any TDBS database and index file, and much much more!

Educational Games / Entertainment Software

We're not sure if they are truly educational or just great fun but we have several new games by Ken Cox and John Rice that certainly make users think! Ken's latest is Classic Hits, with over 2200 song title and rock music questions. And John's Colossal Cliches has a database of over 500 cliches, old and new, with an editor so you can add your own! We have games that make your users think! And there are dozens of other games and entertainment software available, priced from \$29.95 to \$169.95.

Application and Utility Software

We are the recognized source for excellent TBBS/TDBS application and utility software with over 60 programs in our catalog and more being added every week!

Voice Phone (508) 429-6227 Data Line (508) 429-8385 Fax Line (508) 429-3859

GW Associates P.O. Box 6606 Holliston, MA 01746



**Authorized Dealer
Sales / Service / Support**

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IF YOU HAD THREE WISHES,

Take a close look and you'll see why so many sysops are switching to the Synchronet Multinode Bulletin Board System. For one, message networking is second nature for Synchronet. Not only does Synchronet support FidoNet, QWK, and PostLink (RIME) message networks, but network considerations are integrated into every aspect of the BBS. Synchronet's hierarchical message and file areas are the perfect organizational solution for today's multi-network message and CD-ROM file areas. Synchronet has many built in features that other packages either don't offer or require an add on, such as multichannel and private key by key chat, offline reader features, and multiuser CD-ROM support. First time operators appreciate Synchronet's elegant menu driven configuration, while experienced sysops revel in its wealth of options and flexibility. The list goes on and on. But don't take our word for it, check out the competition first. With Synchronet, you won't need three wishes.

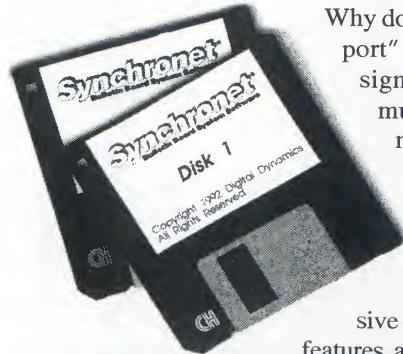


Feature and Price Comparison for an 8 node BBS on a single 486 PC

	Synchronet	Wildcat!IM	PCBoard/M	MajorBBS	TBBS
Node license	\$199	\$799	\$440	\$508	\$895
Multitasker	\$200	\$200	\$200	Yes	Yes
8 port I/O	\$300	\$800	\$995	\$575	\$500
Multinode chat	Yes	Yes	Yes	Yes	Yes
Multichannel chat	Yes	Extra	No	Yes	Yes
Private key by key chat	Yes	No	No	Yes	Yes
Offline reader support	Yes	Yes	Extra	\$199	\$99
QWK networking	Yes	Yes	Extra	No	Yes
FidoNet import/export	Yes	Yes	Yes	Yes	Yes
Send/receive NetMail	Yes	Yes	No	No	Yes
PostLink (RIME) support	Yes	Extra	Yes	Extra	No
RIPscript GUI support	Yes	No	No	Extra	No
Novell/DOS LAN support	Yes	Yes	Yes	Yes	No
976/900 billing support	Yes	No	No	Extra	Extra
Real-time node activity alerts	Yes	No	No	Yes	Yes
Enhanced CD-ROM support	Yes	Yes	Yes	Extra	Extra
Multiuser SDK	Yes	No	Extra	Extra	Extra
Incoming FAX support	Yes	No	No	No	No
Chat between doors	Yes	No	No	Yes	No
Bidirectional file transfers	Yes	Yes	Yes	No	No
Multiple user command sets	Yes	No	No	No	No
Supports DOS doors	6 types	1 type	3 types	No	No
Hierarchical msg & file areas	Yes	No	No	No	No
External transfer protocols	Yes	Yes	Yes	No	No
Total price	\$699	\$1799	\$1635	\$1282	\$1494

Prices do not include CPU or modems. Features and prices compiled from vendor supplied information 2/93, are subject to change without notification. Wildcat!IM, PCBoard/M, MajorBBS, TBBS, QWK, FidoNet, PostLink, RIME, RIPscript, Novell, and DOS are trademarks or their respective companies. Commercial or Shareware Toss/Scan utilities are required for some message network technologies.

YOU COULD TOSS THE OTHER TWO.



Why doesn't Synchronet have a special "multiport" version? Because Synchronet was designed from the ground up as a high-speed multinode BBS capable of running up to 10 nodes on a single 486. It's advanced interrupt driven output design combined with DESQview optimizations maximize CPU utilization, allowing Synchronet to out perform other systems running special "multiport" versions on expensive coprocessed I/O cards. For performance, features, and value, nobody beats Synchronet.

Synchronet® BBS
Multinode Bulletin Board System Software

Undeniable Value

2 Node License	\$ 99
4 Node License	\$ 149
16 Node License	\$ 199
250 Node License	\$ 399
Multiuser SDK	FREE

Node license upgrades are available for the difference plus 10%. Minor revision upgrades can be downloaded free of charge.

Digital Dynamics®

P.O. Box 501 Yorba Linda, CA 92686
(714) 529-6328 voice (714) 529-9721 FAX

Download the Free demo version:

(714) 529-9525 2400bps (714) 529-5313 9600+bps v.32
(714) 529-9721 9600+bps ZyXel (714) 529-9547 9600+bps HST



ZyXEL U-1496

All Courier V.32bis or Dual Standard internal and external modems, with and without fax, are included in the special offer. Any modem purchased by September 30 will include a certificate for \$200 off the price of the upgrade.

"We are committed to growing the very high-speed modem market - this offer makes a V.Fast solution extremely affordable," said Marshall Toplansky, U.S. Robotics Vice President of Marketing. "Our solution not only lets our customers know up front how much this technology will cost and precisely how upgrades will be implemented, but also gives them an incredible value. The Courier V.32bis modem, at a list price of **\$695**, can be upgraded for **\$99**, bring the total cost of a V.Fast solution to less than **\$800** - far less than most competitive products."

The Courier V.32bis, Courier HST Dual Standard, and Courier HST external desktop modems contain a motherboard and smaller daughterboard holding the microprocessors and firmware. The upgrade process consists of simply unplugging the daughterboard and plugging in a new one containing the 28.8 kbps technology. The upgrade takes less than five minutes and can be performed by the customer. U.S. Robotics, 8100 North McCormick Blvd., Skokie, IL 60076; (800)-DIALUSR voice; (708)982-5092 BBS.

ZyXEL'S GONE WEST! BBSCON SHOW AND HOSPITALITY SUITE TO SPUR INTEREST IN ZyXEL'S HIGH SPEED MODEMS

ZyXEL, a leading supplier of high-speed land and cellular modems, will be hitting Colorado Springs with a vengeance to prove they are providing top of the line high speed modems at unbeatable prices. ZyXEL will be demonstrating their new VoiceFax software, ZyCellular and their new portable modem at ONE BBSCON, August 26-29. Everyone is invited to visit them at booths 61 & 62 to receive special show discount prices on their modems.

ZyXEL is also throwing a Wild West Party at the Broadmoor Hotel Crystal Room at 8:00 PM on August 27. ZyXEL will have drawings for free modems, games, food, beer, prizes, and more all set in a wild, wild west theme.

ZyXEL will be demonstrating ZyCellular, an option available for its complete line of modems at the show. This option provides 14,400 bps data rates for both land lines and cellular telephone connections by overcoming many of the imperfections of the cellular channel, including handoff and power change problems. ZyCellular uses V.42 error control with selective reject, which increases throughput by allowing the modem to handle frequent block errors. The modem incorporates six unique protocols designed

specifically for cellular networks.

ZyXEL is also now bundling VoiceFax software for DOS, Macintosh, and Windows with its entire line of modems. With these programs, users can take advantage of the data, fax, and voice answering machine capabilities built into the ZyXEL modems. Users can review, delete, save or forward past voice mail messages, access their voice mail remotely, and record and store hundreds of voice mail messages.

In recent months, the ZyXEL line has one numerous awards including PC Magazine Editor's Choice, Computer Shopper Top 10, Byte Magazine Best Two-Way Communications Modems and Best Value for High Speed Modem, and PC Computing 200. ZyXEL, 4920 E. La Palma Ave., Anaheim, CA 92807; (714)693-0808 voice; (714)693-0705 fax; (714)693-0762 BBS.

OKLAHOMA BBS RAIDED ON PORNOGRAPHY CHARGES

The legal assault on bulletin boards continues this month with a raid by Oklahoma City Police Department Vice Division on Tony Davis's OKLAHOMA INFORMATION EXCHANGE BBS and his associated Mid-America Digital Publishing Company.



Tony Davis
Oklahoma Information
Exchange BBS

About 4:00 PM on July 20, four officers of the Oklahoma City Police Department arrived at the offices of Mid-America Digital Publishing with a search warrant for "pornographic CD-ROMs." Davis was arrested on suspicion of the sale and distribution of pornographic CD-ROM disks. Of the 2000 CD ROM disks available on site, they confiscated about 50 disks, and an estimated **\$75,000** worth of equipment Davis runs his 10-line **OKLAHOMA INFORMATION EXCHANGE BBS** on. The equipment including two computers with gigabyte hard drives, two Pioneer 6-disk drives, four single CD ROM drives, 10 High Speed Hayes modems, Novell network software and associated hardware, etc.

Apparently, an undercover agent had contacted Mid-America Digital Publishing on two occasions and purchased CD-ROM disks containing adult material from the company. At the raid, Davis cooperated with the police showing them whatever they wanted to see, and even removing four disks from CD-ROMS on the BBS machine and showing them to the police. Curiously, these were standard off-the-shelf CD ROM collections NOT published by Davis, including "Busty Babes", "For Adults Only #2," "For Adults Only #3", and "Storm II". More curiously, the police themselves put the disks BACK into the BBS in order to video tape callers accessing the files on the disks.

Videotape seemed to play a major role in the raid. Department employees filmed the entire raid, and released the film to the press which played it on all three local tv network affiliate stations.

Despite Davis' notification, none of the specific procedures required by federal law (Privacy Protection Act) when serving search warrants on publishers was followed, and no acknowledgement or even apparent cognizance of the Electronic Communications Privacy Act made when notified of the electronic mail for some 2000 BBS users available on the system. **OKLAHOMA INFORMATION EXCHANGE** carries some 750 FidoNet conferences, an additional 750 Usenet Newsgroups, and offers callers private FidoNet mail and Internet mail and actually hubs mail for other bulletin board systems as well.

Ironically, Davis DID have a thriving CD-ROM publishing business that produces the **Magnum** series of CD-ROM's including "Magnum 1,"

"Magnum Games and Windows," and "Magnum Sight and Sound." But NONE of Davis's own titles had ANY adult material on them at all - they are entirely "G" rated titles. The CD-ROMS of interest to the Oklahoma City Police were all titles by other publishers that Davis resold.

Davis was released on bail of **\$4500** and faced arraignment on August 3rd. No formal charges were brought on that date, and the prosecutor asked for a delay with no specific new date brought. One complication that has already arisen, aside from the blatant infractions of the PPA and ECPA, was that the warrant was fairly specific about CD-ROM discs. The seizure of the BBS equipment appears to be outside the scope of the warrant - a perhaps unfortunate improvisation by the officers at the scene.

And Davis may have been the wrong person to pick as a test case. A fairly mature, strong willed individual with some financial resource, Davis is represented by Attorney William R. Holmes. While we could not entice him to speak directly to the case, he did not seem a happy camper, and didn't seem too cowed by it all at this point. With the very public televised bust, the city appears to be in the difficult position of now wishing it would all go away without a lawsuit, and no real way to get there from here.

All possible charges relate to Oklahoma State statutes against obscenity. Located in the heart of the Bible Belt, this could be serious. A penalty of up to **\$5000** and 5 years in prison per infraction is possible. If you count each file on a CD-ROM as an infraction, Mr. Davis could in theory be facing over a 100,000 years in jail and nearly a **\$100 million** in fines - another contrast between technological reality and our legal system. From what we understand, in Oklahoma, it is technically illegal to actually BE naked at any time when not actually getting wet somehow, and some legal theorists posit that HBO and Showtime cable television channels are actually infractions under the state laws as written.

The future of Oklahoma Information Exchange BBS is unknown, and Davis himself was unable to comment on the arrest. Mid-America Digital Publishing, 1501 SE 66 St., Suite E, Oklahoma City, OK 73149; **(405)677-6136** voice; **(405)677-9663** fax; **(405)670-6900** BBS.

INTERNET NOTES

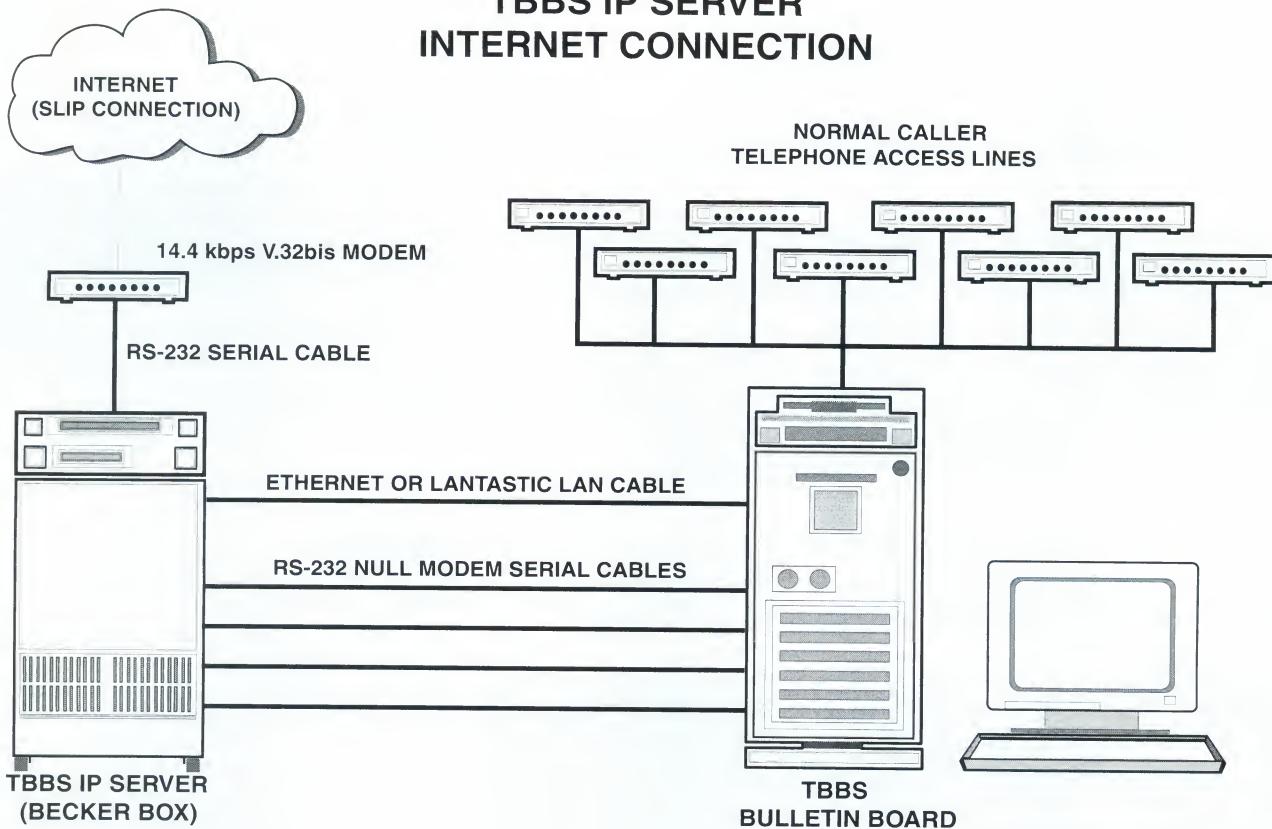
ESOFT TO SHOW INTERNET CONNECTION AT ONE BBSCON

eSoft, Inc. plans a demonstration of an inexpensive box they have tentatively titled a TBBS Internet Protocol Server (TIPS) that may hold one of the keys to connecting an electronic bulletin board system to the Internet for full IP services.

Increasingly, electronic bulletin boards across the country are now offering Internet mail and Usenet Newsgroups, but a few are also struggling to work through the puzzle of actually connecting their bulletin boards TO the Internet using the Internet Protocol and offering TCP/IP services such as telnet and ftp to their callers. Additionally, many of these bulletin boards would like to be available to those on the Internet who may wish to access their BBSs by ftp or telnet - particularly those with a need for International connections which can be prohibitively expensive via direct dial. Typically, this process is bit of a plumbing job involving terminal servers, routers, CSU/DSU units, none really designed for this job and often costing thousands of dollars. A basic IP connection alone can run anywhere from **\$250** per month for a SLIP connection up to **\$1200-\$1500** per month for a leased line and full IP connection. The terminal servers, routers, etc. further drive up an up front cost of **\$7000-\$15000**.

Phil Becker, author of eSoft's TBBS bulletin board system, avows that IP and the connections required to make a BBS fully functional on the Internet are actually something less than rocket science, and can be done for a fraction of that cost. Since he was in fact one of the programming team members that put the Viking lander on Mars, he is actually qualified to make the comparison. And he's pieced together a "demonstration" project to illustrate that this isn't just a matter of opinion. Using a very small PC costing less than **\$600**, a modem, and a heavily modified version of Phil Karn's KA9Q software, he's built a small IP server for TBBS that does some pretty amazing things.

TBBS IP SERVER INTERNET CONNECTION



KA9Q itself is quite a piece of work. It is a multi-tasking software system to connect a DOS machine to the Internet for telnet, ftp, ping, smtp mail, nntp newsgroups, etc. And it can actually act as a router. It is freely distributed and although originally authored by Phil Karn, it has had hundreds of modifications made by a number of individuals. The result is at least 11 distinct versions of this program available for download online, each with varying capabilities. The documentation is spartan to the point that the biggest challenge to KA9Q is getting it running. But it does do a passable job of extending some pretty heavy duty TCP/IP functionality to a PC. The primary drive to the origins of this program revolves around packet radio and the AX.25 protocol. Hundreds of ham radio-based bulletin boards are connected via packet and TCP/IP, mostly using KA9Q (Phil Karn's call letters?)

Becker took one version of KA9Q apart, and rewrote many of the applications such as telnet, ftp, smtp mail, and a few others around the edges of it, and reconfigured it more or less as a terminal server specifically designed for bulletin boards. He connects the

IP server box running this heavily modified software to a TBBS system using null-modem serial cables, and his INTERCHANGE option module on the BBS provides access to these ports. The IP server will automatically route telnet requests to the next available serial port, allowing telnet callers access to the BBS. Additionally, Internauts can FTP to the BBS, which works a bit differently. The IP server allows ftp access to file directories on the BBS itself via a LANtastic local area network.

BBS callers, conversely, can pick items off a TBBS menu to access the IP server to telnet or FTP OUT to other services. In the case of telnet, this allows them to basically logon to any Internet service worldwide. In the case of ftp, they can ftp a file which is transferred to the BBS drive, and from there they can download the file as they would any other. The result is a system that allows TBBS callers access to the Internet, and Internet callers access to TBBS.

The IP server we saw demoed connected to the Internet using an ordinary 14.4kbps modem via a Serial Line Internet Protocol (SLIP)

account. Using this pipe, the system can support up to about four simultaneous sessions. With more serial ports, more connections are possible, but probably not for anyone with a normal human attention span.

We were excited about this product for a couple of reasons. For one thing, it replaces a LOT of hardware, software, and adapters with a pretty simple little PC with modem and software, to accomplish an IP connection many BBS operators have laid awake nights trying to piece through. It does it in all cases for less than a **\$1000** total investment in hardware and software. And it seems to work. We telnetted into TBBS systems, out of TBBS systems, performed FTP sessions in both directions, and it all more or less hung together - which is approximately our experience with Internet as a whole.

Becker stresses that the TBBS Internet Protocol Server isn't a product - yet. With the KA9Q heritage, he's not certain he can sell it, or even give it away at this point. Internally, they characterize the product as a "lab project" to prove the concept. But he does assert that there is noth-

RIP - a new standard!

Graphics on a BBS?

QmodemPro has it . . . NOW!



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ing mysterious about the Internet or KA9Q and that ultimately he believes that DOS-based bulletin boards will actually do a better job of providing services on the Internet than do the UNIX systems many Internauts commonly encounter. "Ultimately, I have to build this product," says Becker. "The question is when."

But with the experience gained in puzzling through the demo system, he does have a pretty good idea how. "In rewriting this task in assembly language from scratch, we believe we can service 16 serial ports from a relatively modest PC, and connect to the net through SLIP, a 56 KB leased line, ISDN, or even a T1 connection with little problem - AND perform routing functions aside from the BBS access," asserts Becker. "This just ISN'T that hard."

Meanwhile, eSoft plans on having the TBBS IP Server up and running at their booth at ONE BBSCON to allow show attendees to telnet or ftp into esoft.com, telnet or ftp out of it, and generally get over the "mystery" of connecting a BBS to the Internet. We think ultimately a lot of bulletin boards, TBBS and others as well, will be using this "Becker Box" to make the connection.

INTERNET FILE FORMATS - DELETE STAR DOT TAR

Each particular pond of the online world has its own set of conventions that seem overwhelming at first, and pretty basic once you know them. The list of file transfer protocols and file formats on bulletin boards seems unnecessarily complex to new callers, and pretty simple to those that have become accustomed to dealing with .ZIP files, .ARC files, and .ARJ files. Once you get used to automatically picking ZMODEM off the protocol list, you hardly see the other protocols listed.

But throw a BBS user in Internet waters, and they do flounder a bit in a sea of .tar and .z files, and dealing with directory names longer than their neckties. But it really isn't a lot different.

Many who find a way onto the Internet naturally enough begin to

learn about various treasure troves of files. Often, file collections specializing in MS-DOS programs will already be compressed in the familiar .ZIP file format. But for text files, descriptions, and source code most at home in a UNIX world, some slightly different file formats are quite common.

In general, the UNIX world does separate the archiving function that combines multiple related files into a single entity, and the compression function, which reduces the total file size.

Archiving is most often done using a file extension .tar or .TAR. This stands for Tape ARchive and naturally enough it was originally developed to store directories off of disk onto 9-track tape. These files can contain both files and directories, and it generally includes the subdirectory structure needed to restore the files.

.TAR files can be extracted on a DOS machine using several programs. But there is a bit of a problem. UNIX file names can be multipart and quite long as in a.really.long.MixED.CAse.UNIX.filename. They can also be mixed case with upper and lower case letters. So simply extracting TAR files onto a DOS machine also requires some form of filename translation, usually referred to for no particular reason we can devine as file "munging".

One program that handles .TAR extractions pretty well is ExTAR. ExTAR was written by a German named Gisbert W. Selke and distributed as free software in the file **EXTAR10.ZIP**. It was written in Turbo Pascal and we've been unable to locate a version past the original 1.0. I wish I could write a 1.0 of something that worked, but Mr. Selke seems to have handled it.

Another basic port of the TAR program for DOS was done by Mark Colburn of The USENIX Association in St. Paul Minnesota. Mr. Colburn wrote **TAR4DOS.ZIP**.

Both these utilities are available by file transfer protocol (ftp) from [ftp.uu.net](ftp://ftp.uu.net) in the subdirectory [systems\(ibmpc/msdos/simtel20/filutl](systems(ibmpc/msdos/simtel20/filutl).

The compression function most common on the Internet is referred to, appropriately enough, as **COMPRESS**. This is a compression program similar to PKZIP in that it uses Lempel-Ziv coding to compress data - though generally not with as good a compression factor as we are accustomed to on bulletin boards. COMPRESS files are generally, but not always, noted with the file extension .Z. Further, the tape archive and compression processes can, and often are combined to form files like filename.tar.z. You would want to perform the processes from right to left to get the original file. Uncompress the .z, and then extract the .tar.

We also found a couple of passable DOS utilities for uncompressing. Probably the standard workhorse is **COMPRESS** version 4.3c available in the file **COMP430D.ZIP**. Like much of the software in the Unix community, this is free of charge and the source code is available in the file **COMP430S.ZIP**. Generally, you would use the syntax compress -d filename to decompress a particular file. As best we can tell, the first release of this program was in July of 1984, it's had as many as eight official authors, and the 4.3c release was in January of 1990. This one has made the route.

An interesting relative newcomer is a program titled **GZIP**. Written by Frenchman Jean-loup Gailly, GZIP is also freely distributed with source code in the file **GZIP123.ZIP**. GZIP is interesting in that it actually automatically detects and decompresses several file formats, including COMPRESS, ZIP version 1.9, and it's own .GZ format. While compress .Z files are still the most ubiquitous, .GZ actually is much improved with regards to the resulting data size.

Both **GZIP123.ZIP** and **COMP430D.ZIP** are available by ftp in the directory [wuarchive/systems\(ibmpc/msdos](wuarchive/systems(ibmpc/msdos) at the ftp site <knot.queensu.ca>.

We have put up a small Internet support files file area on the Boardwatch BBS with uuencode/decode, a few specific RFCs, and these .tar and .z extractors for those who have difficulty ftping about the Internet.

PBS ONLINE

by Bill Gram-Reefer

This past Spring, the Public Broadcasting System (PBS) circulated a Request for Information (RFI) to a wide variety of software developers and communications consultants involved in the telecommunications field. The purpose of the RFI was to get as much feedback as possible on how PBS could fulfill its new mission of launching a bulletin board system (BBS) that will eventually link 196 PBS stations via satellite and allow for local member-users to access local PBS nodes using modems and telephone lines. As a lesson in state-of-the-art proposal writing for a BBS, to help you plan, pitch, and fund a BBS for your own home, business, school, or non-profit, this document takes the cake with over 40-dense pages, including appendices, glossary, and bibliography. There's even a video on how the proposal was made, so now you really know where all of your pledge-night dollars have been going!

While a commendable project for PBS in itself, the document, as a vision of what a BBS should look like, and what kind of features it should have, powerfully illustrates the current, highly-evolved state of BBSing in terms of technology, user ergonomics, networking capabilities, and slam-dunk usefulness as a meaningful communications tool for businesses. BBSing is just not for hobbyists, anymore. Consequently, like it or not, the proposal also acknowledges many new standards concerning what hot, new, and public BBSing should require, including true cross-platform support, and graphical user interface (GUI) that, with the introduction of the Mac-based GUI systems now supporting Windows, have become must-have items to accommodate new users unfamiliar with kludgy, unintuitive, command-line frustration traps offered by other outmoded BBS systems.

Content for PBS Online will vary from station to station, but generally, each node would provide access to the following selection including but not limited to: PBS Online instructions, tutorials, and manuals; PBS programming schedule, transcripts, and classroom support materials; Linknet Learning Link, K12 USENET news groups, FidoNet K12 file libraries and conferences, KIDSNET and

EDUCOM files relevant to K12 schools; ERIC and other educational resources, the Project Gutenberg archives, congressional contact information, and public domain software and file libraries.

Here are some system requirement highlights from the proposal:

1. Network requirements—using TCP/IP as its primary networking protocol, provide gateways to Internet and offer an Internet sub-addressing scheme for member stations; add potential e-mail connections to FidoNet, FrEdMail, OneNet, CNN News, Clarisnet, and USA Today; automated address translation, network management and control, content screening including virus protection, copyright enforcement, and obscenity screening; and the ability to act as a bulletin board clearing house service for disseminating articles and general files.

2. Server specifications—in addition to supporting a command-line user interface, the system requires a graphical user interface as well, using client-based application software supporting Windows and Macintosh. Auto registration, time limits, search tools, file transfer tools including ZMODEM, and online help round out the feature wish list. Additional consideration is given to extendibility to include access or “doorways” to other applications including Wide Area Information Service (WAIS). Furthermore, the electronic mail function will include a text processor and attachment capability for file transfers. A hierarchical data structure will incorporate folders. Users shall also enjoy real threading, private mailing lists, forms, and moderated conferences.

System Administration should be remote capable by calling in with the client software to administer groups of users assigned with certain levels of privileges and access to various folders, as well as have links to conferences for cleaning up after a telethon. Real-time server monitoring is also an item mentioned, as in forced logoffs and server logs with full reporting with an array of user stats. Interestingly, mention of inter-node messaging and chat room capabilities were not found in the proposal, so there'll be no “type-along Messiah” during pledge night.

3. Client specifications— At minimum, RS232 asynchronous connections and TCP/IP via Ethernet; hopefully include support for connections via AppleTalk, IPX, Netbios, or X.25. One or more active file transfers while also reading files is cited as a must-have feature, along with platform specific multitasking, previewing, user scripting, and platform specific off-line mail and conference readers. The graphical user interface should include overlapping, scrollable, and resizeable windows, mouse support, icons, pull-down and pop-up menus, and dialog boxes, although, on the Mac side, there is no mention of AppleEvents compatibility or true drag-and-drop functionality for the icons other than graphic representations of folders.

According to a knowledgeable professional familiar with the project, expect this RFI process to take about a year to filter through to reality. More so, when you look at the shopping list, you realize pretty quickly that some of what PBS wants in one package just hasn't been shipped yet and it might become a matter of hot wiring a version of NovaLink with a substantial customized feature set that could take a year to implement soundly. But the end product, even if it incorporates only 80% of the initial specifications, will still prove to be ahead of the pack; something like a cross between FirstClass and MacIntercomm, but with a functional off-line reader, one might imagine; combined with the administrative power of a Wildcat, for instance.

Whatever the outcome, though, this proposal has certainly pushed the envelope for higher standards within the BBS software community. In effect, the proposal legitimizes several areas, particularly cross platform support for Internet connectivity, and GUI-based, point-and-click ease-of-use via client-based user interface programs as forwarded by the newer Mac BBS programs. More importantly, the PBS proposal will stand as a critical link in the evolving picture of how Americans will access public, distributed networks. Should such a venture come from the schools, freenets, quasi-public orgs such as PBS or Red Cross? Or, will we still need local, independent freenets in each burg? PBS, 1320 Braddock Place Alexandria, VA 22314; (703) 739-5126 voice.

Searchlight 3.0

Easier to Use

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RIP Graphics

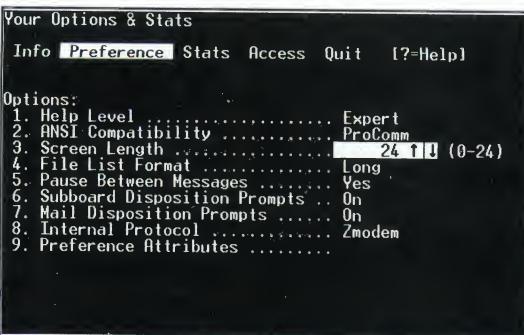
In 1993, Searchlight is pioneering online graphics technology. Our programmers helped design the new non-proprietary RIP graphics protocol that is quickly becoming a BBS industry standard, and Searchlight 3.0 is the first BBS product with internal RIP support. With RIP, you can design startling high resolution graphics interfaces like the ones shown here, complete with pictures, icons, fonts, mouse buttons, and more. You can even add graphics to messages! RIP offers an exciting new way to look at BBSing, and Searchlight 3.0 has it right now.



With Searchlight 3.0 and RIP, your BBS can have amazing graphics without giving up DOS or using a proprietary terminal package. This entire login screen is just 2,746 bytes!



Combine Searchlight's famous menu-building features with RIP graphics to produce elegant, mousable menus. Using your BBS has never been easier.



Even in plain text mode, Searchlight's menu bars and input boxes give you full-screen functionality with virtually any ANSI/vt100 terminal.

If you don't see it listed here, it's probably because we ran out of room:

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- DigiBoard & FOSSIL support included in every version
- Internal Zmodem protocol
- QWK, Fidonet & UTI support
- Totally configurable menu editor
- CD-ROM support
- DOOR.SYS, PCBOARD.SYS, and DORINFO.DEF support
- Relational links to user file from mail and conferences
- Full maintenance while system is taking calls, even from remote
- One-keystroke file tagging
- Over 16 million security profiles
- Supports virus-checking software
- Upload directly to message editor
- Up to 15 external protocols
- True private mailboxes for all users
- Fidonet private netmail with nodelist lookup, mail routing and more
- Requires just 250K RAM per node
- ANSI & RIP auto-detect
- Forward, kill, or download entire message threads with one command
- First upgrade free

\$ 99	single line
\$179	1-3 lines
\$299	1-10 lines
\$399	unlimited



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SOFTWARE NOTES

TBBS SYSTEM DESIGNER

by David Hakala

PC Information Group Inc. has released its long-awaited Menu Conversion Utility, a suite of programs which convert existing TBBS menu control files (MENU????.CTL) into the formats used by the company's System Designer application generator. Provided at no cost, the utility eliminates hours of work formerly required to upgrade an existing TBBS system to the System Designer programming environment.

The Menu Conversion Utility reads existing menu control files and generates System Designer Project (PRJ), Library (LIB), and User Access (ACC) files. These files contain all of the screen information and control settings specified in the original *.CTL files, in System Designer's object-oriented format. The conversion process can simultaneously generate any desired combination of three versions of each menu: color ANSI/IBM graphics, black-and-white graphics-only, or ASCII text-only.

In test runs, the conversion utility performed quickly and flawlessly on an 80386/33Mhz PC, taking about two to three seconds to convert each menu of a representative TBBS system. Minor manual adjustments, such as giving mnemonic names to User Access Level database records, were highlighted by the utility itself and swiftly accomplished.

The conversion process is also a learning experience, even for an experienced TBBS developer. The SDL code generated from the resulting System Designer files was noticeably more readable than the piecemeal original, and the new MENU????.CTL files precisely duplicated the functionality of the originals — only more efficiently than the original design.

SYSTEM DESIGNER PUTS FUN BACK IN BBS DESIGN

System Designer, a \$149 Computer-Aided Software Engineering (CASE) tool, makes eSoft Inc.'s powerful but daunting TBBS bulletin board system

software accessible to novices and a dream come true for expert TBBS developers. No matter what your level of expertise, System Designer will help you design a better BBS in record time, and have fun doing it.

Like BBSing itself, System Designer is hard to explain to the uninitiated. Those who have not tried the program may think it is "just another drawing utility" like The Draw, or at best a TBBS-specific menu painter like ProMenu, that generates ANSI/graphics, graphics-only, and text-only menus from a single template. System Designer does menus, but it also does a whole lot more.

OVERVIEW: ALL YOU NEED IN ONE PROGRAM

System Designer integrates menu design, SDL source code generation, user access control, macro maintenance, menu control file compilation, even live TBBS test runs, in an elegant, mouse-driven programming environment. BBS developers no longer need to learn a text editor and an ANSI drawing program in addition to learning the components of TBBS. You can also throw away your cheatsheets of SDL macro definitions, security flag and privilege level settings. System Designer does it all under one roof, and keeps house for you.

A customizable batch file can be run from the System Designer Compile menu to compile the generated SDL source code using TBBS' SDL.COM. If errors are found in the source code, a source listing including SDL-generated error messages is displayed. If no errors are found, the batch file runs TBBS so you can see how the system works online.

PROJECT MANAGEMENT FEATURES

Consultants who design BBSes for multiple clients and sysops who maintain a number of subsystems on their BBSes will appreciate System Designer's Project Manager module. It makes selecting and working on any project or subsystem as easy as point-and-click, keeps track of which menus in any BBS project have been compiled, and lets you specify which menus should be compiled and tested during the current session.

MENU PIRATING & TREE DISPLAYS

System Designer makes it easy to track and re-use all the bits and pieces of every BBS you have ever designed — or ever seen. Portions of previously designed BBSes can be copied and modified for use in new projects. A TSR utility called SAVER.COM captures any DOS text-based screen and saves it as a binary file that System Designer can import. If you loved that opening screen on The Hot Muddy Duck BBS, you can load it into System Designer and edit it to suit you. (This feature is sure to set off minor copyright infringement wars among sysops, but that's what keeps BBSing interesting.)

System Designer includes a menu-tree function that will show you at a key-stroke what each option on a menu does and where GOTO or GOSUB commands lead. Does "<G>oodbye" log the user off immediately (command type 10) or take him to a final menu (command type 5)? The menu tree will show you.

DESIGNING A BBS WITH SYSTEM DESIGNER

Creating a new BBS starts with making a Project File, a control file which maintains a list of all menus, their definitions, access control settings, and other information about the new BBS. Each BBS menu is defined on a screen that asks for the menu's four-character MENU????.CTL file name, a more meaningful description stored in the Project File, i. e., "Hackers Forum File Menu," and optionally a Billing Class for the menu.

The rest of the Menu Definition Screen consists of checkboxes and radio buttons. First, you specify which version(s) of the menu to create as SDL source code: ANSI, black-and-white graphics-only, and/or ASCII text-only. Second, decide whether to clear the caller's screen before displaying this menu. You would not clear the screen if this menu were an overlay on an existing menu, as in a pulldown menu application. Third, set the background color to use when the screen is cleared, by clicking on a color bar.

The "Complex menus" option enables creation of menu entries larger than SDL's normal limit of 4096 charac-

ters. TBBS v2.2 includes a new ENTRY: command that loads and displays external menu display codes on demand. Setting System Designer's "Complex" menu definition option lets you take advantage of the ENTRY: feature by storing complex menus in external files instead of compiling them as SDL code.

BUILDING MENUS FROM OBJECTS

After defining a menu, you find yourself staring at a blank screen set to the background color previously defined. This challenge to your creativity is where the real fun of using System Designer begins.

Use the mouse to mark a rectangular block on the screen; such marked blocks form the "objects" of which all System Designer menus are composed. An object can be a whole menu, one line of text on the menu, a single character, or any other piece you might want to move, define as an SDL menu entry, or re-color.

A pulldown Block Manipulation Menu lets you draw a box to define the boundaries of the menu, using effects such as single- or double line boundaries, and shadows that provide "depth" to a menu display. Shadows can be "transparent;" if they fall on existing text, the underlying text will still be visible in grey-on-black colors - a nice effect. Custom shadows composed of any graphics character can also be created; they will obliterate underlying text. You can also draw freehand using single or double lines, or any printable ASCII character you wish.

Adding text to a menu is a matter of positioning the cursor in an object and typing away. Text can be centered within the object's left/right borders with a single keystroke. System Designer includes a database of TBBS v2.2 insertion parameters, making it easy to insert these system variables in any menu.

OBJECTS MAKE BETTER BBSES

The ease with which you can move objects and blocks encourages good menu design; "good enough" just isn't good enough when perfection takes so little effort. Any rectangular portion of a menu can be highlighted and moved to a new location. Predefined

objects can be selected by simply double-clicking on them. You can drop a block or an object anywhere on the screen, but System Designer will warn you if you are about to obliterate an underlying object.

AMAZING ANSI CONTROL

The minute and easy control System Designer gives you over foreground/background colors and the attributes of every object is one of this program's greatest strengths. Just highlight a block, select Block Attribute from a pulldown menu, and you can pick any combination of colors and intensity from a matrix while viewing a sample of the result. A press of a key can make a block blink.

If you don't like the new color scheme, it is easily changed. Let's say most of the text on your menu is white-on-blue, but you made the menu keys bright green and that now looks awful. Just highlight the portion of the menu that contains bright green foregrounds, select Foreground Attribute, specify the old foreground color (bright green) and then choose a new foreground color. Only the bright green foreground colors will be changed! Background colors are just as easily and selectively modified.

You can also precisely set the position of the ANSI cursor by row and column, useful when designing animated ANSI screens and other applications where the cursor must "jump" to a new screen position. You can also set the cursor's colors and make it blink.

ADDING FUNCTION TO MENUS

You must add TBBS commands to each menu if you want it to do something when a user presses a key. System Designer keeps this process easy and well organized.

Just create a separate object for each menu option, i. e., "Upload," "Download," "Read Messages," and so on. System Designer lets you specify an activating menu key, TBBS command type, and any optional data (Opt Data) for the command. System Designer maintains convenient popup lists of available menu names, message boards, and conferences, so you do not have to remember all of those cryptic names when specifying Opt Data.

ACCESS CONTROL LIBRARY

Security flags and privilege levels comprise a user's access profile, which determines which menu lines will appear to a given user and how each menu key will function for him. Keeping track of different access profiles is a never-ending struggle for most sysops. System Designer lets you assign meaningful names and descriptions to all of the different flag/privilege combinations used on your BBS, and choose the appropriate access profile for a menu entry from a scrollable picklist.

AUTOMATED CODE GENERATION

The heart of System Designer is a unique module that generates flawless, well-structured SDL code from the menus you design. You can specify whether to generate SDL code for all menus, only for menus that have changed since code was last generated, or only for a specific menu.

The Code Generator module writes SDL code the way it was meant to be written — the hard way, but the most efficient way for online display. ANSI screens, for example, are best written using one SDL menu entry per screen line, like this:

ENTRY:

```
[14;2H[45mThis is a [1m[33mFRAME  
Object[1m[37m.[40m  
ANS=-
```

Few BBS designers do things this way; it's just too tedious and error-prone. But Code Generator automatically does it for you. The results include smoother and faster menu displays, faster returns from menu function calls (Read Messages, Display a text file, and so on), and fewer disk drive accesses.

This code generation method, combined with other System Designer features, let the sysop precisely determine which menu items will be displayed first. For example, some sysops like to paint boxes, then fill in text; others want the user to see the text first while the box is being drawn. System Designer lets you easily determine the order in which menu objects will be displayed. If you want line 3 of a menu displayed before lines 1 and 2, no problem.

Once SDL code is generated for all menus, a list of any code generation error messages is displayed at the top of the screen, along with a picklist of three action options: Return to Project Manager; Execute BATCH.BAT (the SDL menu compiler/TBBS test-drive routine); or Exit to DOS.

PRODUCTIVITY GAINS

Sysops accustomed to the normal way of designing TBBS systems find it hard to believe what System Designer can do for their productivity. But your author designed in two 8-hour days a BBS which includes eight separate subsystems, with a total of 88 different menus (ANSI, graphics-only, and text-only versions of each menu), and 40 distinct access profiles.

That project would have taken over a week without System Designer. The ANSI menus would not be as pleasing, and half of the extra time would have been spent debugging minor typographical errors. Instead, the human designer was able to concentrate on the appearance and functionality of the BBS from a user's perspective, and leave the machine-level details to System Designer. Building a BBS became a more creative, fun occupation, and less of a nitpicking chore.

FIRST-CLASS PRODUCT SUPPORT

PC Information Group backs System Designer with the kind of support professional sysops expect. There is a BBS where you can test-drive and download several examples of BBS menu sets built with System Designer, confer with tech support and other TBBS designers, download upgrades and utility files. The program's documentation is bound, typeset and well illustrated. Technical support is provided by experienced TBBS designers from 9:00 a.m. to 5:00 p.m. CST Monday through Friday.

System Designer is a whole new way of designing bulletin board systems — the best way currently available, in your author's opinion. If you run or plan to run a TBBS system, "You just gotta get this thing!" (Sorry, Prodigy.) PC Information Group Inc.: 1126 East Broadway, Winona MN 55987. Voice: 800-321-8285; in Minnesota, 507-452-0450. BBS: 507-454-8025.

COMMERCIAL SERVICES

UPDATE ON GENIE

by Donn King

First, some updates on information: just as we went to press for the August issue, GENie made some changes to its software. Two of the items mentioned in that column thus need updating.

1) PCAladdin is now in version 1.70, and older versions will no longer be supported. In a press release, PCAladdin sysops said, "Although the primary reason for this change to Aladdin is to work properly with GENie's new rate structure, we have taken this opportunity to add in a number of frequently-requested features, including additional script commands."

To obtain the new version of Aladdin, you may either enter M110;4 at a numbered GENie page prompt, or you may download it from the PC Aladdin Support RoundTable software library (enter M110;3) as **ALAD170.EXE**. Normal GENie connect time charges will apply.

2) The C command that would take you back and forth between using menus and using a kind of "expert" mode that only showed you page prompts has been dropped. If you are going to use Aladdin, or just want to use the expert mode, you need to enter the keyword SET at a numbered GENie page prompt, then step through the menu items. Remember that

whenever you go to an unfamiliar page and need to see the menu momentarily, entering a question mark (?) will bring it up.

Internet mail update

I made online friends with Alan Seaver a few months back. He was about to leave the Internet though, because he was leaving his school and had no other access. I told him about GENie's rate changes, which would make it one of the most inexpensive and accessible services for getting Internet e-mail.

A couple of things limited GENie for Internet, though. You can only use it for e-mail; ftp and telnet are unavailable. As Alan said, though, it had been months since he used either of the latter. The biggest irritant was the limit on the address field; you could include no more than 35 characters, which effectively prevented participation in many usenet groups and correspondence with long-named schools. I couldn't send through GENie to my own main address, the one which used to end these articles!

Although the ftp and telnet situation has not changed, Internet RT sysop Andy Finkenstadt said, "The 35-character limit that would prevent some messages from going out has been eliminated as of July 15, 1993. So now an address to a Fidonet node, or to some long mailing list addresses, will work just fine. Some routing problems were fixed as well with the America Online service. Mail to people @AOL.COM now works."

Maybe I'll see Alan around GENie now.



VR RT becomes reality

Actually, it's the Multimedia, Desktop Video and Virtual Reality RoundTable (they call it Multimedia RT for short).

Co-managed by Denny Atkin, COMPUTE Magazine's Interactive Entertainment editor, and Peggy Herrington, freelance editor/writer and founder of the industry's first multimedia disk-based magazine, the RoundTable is scheduled to open in early September.

Herrington told me they have planned in October Real-Time Conferences with Lou Wallace addressing desktop video, Howard Rheingold on virtual reality, and J. Micheal Straczynski on graphics production for the "Babylon 5" TV series.

They also plan an extensive software library of downloadable commercial multimedia program demonstrations and sample projects, plus graphics, audio and information files for IBM-compatible, Macintosh and Amiga, and product support by hardware and software manufacturers.

"Commercial VR endeavors include shopping mall projects such as the franchised parlor chains, Virtuality, and Paramount's 'Star Trek: The Next Generation,'" Herrington said. "The Multimedia RoundTable will address developments in the VR arena, providing current, in-depth information for people interested in this emerging technology."

RTs sprout

The opening of several new RoundTables followed in the wake of GENie's rate changes in July (see the August issue for a run-down of the new rates. Briefly, at 2400 baud, GENie costs **\$3.00** per hour between 6 p.m. and 8 a.m. local time, with four hours included in its basic monthly fee of **\$8.95**). They include both general interest and product support RTs. They include:

* The Europe RoundTable—advertising for it says, "We will cover all countries in Europe. If we haven't started a topic on your favorite European country let us know and we will start one for you." The Europe RT is part of the Germany & Europe RT; European categories begin in Category 25. Enter M725 or keyword EUROPE or GERMANY.

* The SCA RoundTable, which supports the worldwide activity of the Society for Creative Anachronism, a group of nearly 25,000 members dedicated to the study and selective re-creation of aspects of pre-17th century cultures. The Bulletin Board includes categories for each of the SCA's 13 "Kingdoms" (regional-level groups), plus Arts and Sciences, Heraldry, Fighting, Bardic Arts, Offices, Events, a Revel for socializing, and other support topics. They also have an online version of SCA combat. You don't have to be a member of SCA to participate or play. Enter M1425 or keyword SCA.

* The OS/2 RoundTable, which provides support for IBM's controversial operating system. Sysops say, "Recent updates of OS/2 make it easier to use and more powerful."

The RoundTable offers technical support for OS/2 itself as well as applications; the software library has utilities, shareware and public domain products for use with OS/2.

Featured RT: Homeschoolers in the Education RoundTable

We're going to start featuring a RoundTable each month to help you get to know the people on GENie. This month we consider the ERT.

The Education RoundTable provides an online home for professional educators, parents with school-age children, commercial trainers, and homeschoolers. Bobbi Pournelle is the "principal"—the sysop of the ERT.

Bobbi has been with the ERT since coming to GENie in 1987. She is married to Jerry Pournelle, a well-known science fiction and nonfiction writer who also has the distinction of heading the only GENie RoundTable centered around an individual, the Jerry Pournelle RoundTable. The Pournelle family thus finds GENie a major part of their lives.

"I came to GENie at the invitation of Neil Harris (who left GENie recently," she said. They had known each other professionally for years and were on BIX together. "He suggested that GENie would reach a totally different audience and that my contact would be wider with more students, more teachers and certainly more parents. My desire was to encourage the Learning Triangle to communicate. I

always thought of the triangle as parents, student and school folks. Things took an interesting turn with the addition of the HomeSchoolers."

Although homeschoolers gather on other electronic services, their reception among professional educators vary. Some see homeschoolers as a threat to either their principles or their livelihood, but on GENie "Our teachers are secure enough that they seem to like the interchange and don't feel threatened by these dedicated parents. We all learn from each other."

Homeschoolers have a variety of reasons for their educational choices. The popular conception of homeschoolers centers around religious "fanatics." Many of the homeschoolers on GENie homeschool for religious reasons, but hardly strike you as fanatic.

For instance, Rich Shalvoy said, "We are homeschoolers of the Christian variety, having just finished our third year. GENie offers networking with like- and dissimilar-minded parent-educators. There is the chance to help share ideas with others and to learn from them.

"There is the community aspect, too," he added. "Many homeschooling parents are good, caring people who are also intelligent and usually are not afraid to express an opinion—the kind of people you'd like to have as friends if they happened to be in your neighborhood. Through the wide reach of GENie, this now becomes possible."

Al Sutherland said, "The two main things I get from GENie are the ERT and Grolier's Encyclopedia. The ERT gives you fast responses if you have a problem or question you need help with. This is also almost my only contact with other homeschoolers."

Homeschoolers from Hawaii to Florida to New England gather to compare notes on curricula, suppliers, and teaching tips in Categories 8 and 9, overseen by Topic Cop Anne Wasserman. Twice monthly Real-Time Conferences provide real-time contact, and participation will likely go up with the lower per-hour rates.

When I first got to know the homeschoolers in late 1991, Beverly Marshall told me, "I never would have attempted homeschooling until the Education RoundTable showed me I could. A year ago I didn't know any-

one who did this, and now I know a lot of wonderful people."

Other homeschoolers do so primarily for educational reasons. Oak Ridge, Tennessee, has one of the best public school systems in the nation; it also has one of the largest concentration of homeschooling populations in the state. David Olive and Jacki Willard homeschool their son, James, because they believe it is educationally superior to methods that collect 30 or so children into one room and attempt to teach all of them the same thing at the same time. James has also been diagnosed with Attention Deficit/Hyperactivity Disorder. Several homeschoolers on GENie have similar circumstances; their children do much better educationally at home. In fact, a study conducted by the Tennessee Department of Education showed homeschoolers across the state scoring in the 80th percentile on standardized tests, significantly higher than the 50th percentile of the average public school student.

The most accurate generalization about homeschoolers is that they homeschool for a huge variety of reasons; each family generally has more than one reason. "Our kids are still young yet, but we are planning to keep them home," said MacBeth Derham. "We are homeschooling for political and religious reasons (Catholic), and because I work for a consortium of school districts and have seen horrible things done to kids' self esteem in the name of education. I first found out about homeschooling CI\$ (Compuserve). Someone there said that GENie had a wonderfully active homeschooling group, so I checked it out and here we are!"

"Right now, GENie is a way for us to network and find out what different methods, materials and resources are available to us," she continued. "The support from others who have made the same choices is invaluable. With GENie we can make connections that are impossible even within local support groups...and we can do it in our pajamas! My house doesn't have to be clean, yet you can all come over and talk. I can visit without getting into a car, or finding a sitter. These things (and Aladdin), make GENie a great online value for our family."

Not all homeschoolers agreed about the value part. When the rates changed on July 1, a dozen or so

explicitly departed the service; it is difficult to tell how many others may have done so. Many of them had noted for a long time that they could only afford to come online because of GENie's \$4.95 a month flat rate, since bulletin board under the old scheme were free. You could count a couple of hundred posters, and attendance in categories (prior to GENie disabling the command that showed this) showed a couple of thousand, yet fewer than half a dozen would show up for the average Real-Time Conference. Homeschoolers were among the 15 percent whose actual charges were expected to go up under the new pricing.

Still, many of the old regulars stayed around; many of them say their personal charges are lower, and that they can find no better place for networking (some of them joined other services while considering leaving GENie; many of them report homeschool groups on other services to be not nearly so active or welcomed within the education areas).

"Perhaps GENie is the forerunner of how home-centered schooling and community centered schooling will operate in the future," said Bobbi Pournelle. "Through the electronic nets the roads of learning merge and hopefully politicians will begin to pay more attention to what is happening and how folks are willing to accommodate to the needs of the family with learners - ALL!"

Pournelle sees the homeschoolers as an integral part of a RoundTable dedicated to education in all its forms. "The best thing about running the ERT over the years has been meeting [interesting] folks. The GENie folks are brighter than the average bear and wish to become better informed and are most willing to share with others. We try to create light while sometimes creating heat. Things on GENie run in cycles which reflects what is happening 'on the street.' The latest issues and concerns such as vouchers, standardized testing, educational spending and policies are aired here."

"Another joy has been meeting so many bright kids. Watching their growth in self-expression has been great. This reflects upon their self-esteem and growth in using the technology to enrich their lives. When the teachers are exchanging innovative and successful teaching techniques such as 'Math in the Cemetery, and

the kids are talking about writing their essays for college applications and parents are debating how to ensure that they have covered all bases for finding the ideal nursery school for their cubs I am the happiest."

Bit and pieces

The 1993 Northern California Nude Beaches Guide is available in the Left Coast RT library. This is the 18th edition of the guide that is updated and expanded annually by Gary Hanauer. For information on naturist aquatic recreation, download files 1701-1707.

For continuing discussion on naturist recreation and social issues, read Left Coast Naturists Online, CATEgory 17 of the Left Coast BB.

More than 400 leading databases from the top publishers in the world are now available 24 hours a day in the Dialog Database Center. The center includes information on worldwide businesses, government news and regulations, computer technology, national and regional news, science, grants and contracts, education, medicine, law, marketing, and more. The information encompasses more than 3,000 fulltext sources plus hundreds of business directories and leading reference collections.

We'll take a look at personal and business information resources in a future column. Next month: a look at navigating GENie, and a focus on the Amiga RoundTable.

NTN Communications, Inc., a company based in Carlsbad, CA, that provides interactive trivia and live sports games to over 1,000 restaurants, bars and hotels throughout the United States, Canada and Great Britain, has joined GENie. A front end is available for IBM, Amiga, and Atari, and a Macintosh front end is in beta testing now. The area includes several games, including Countdown (played from 6 p.m. until 2:30 a.m. most nights), Showdown (played Tuesday beginning at 9:15 p.m.) and Sports Trivia Challenge (Thursdays beginning at 9:15 p.m.). All times are Eastern. Each time you play and do well in the rankings you earn prize points that accumulate. Organizers say they give free time, TVs, VCRs, and other items as prizes.

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MACINTOSH BBS NEWS

NOVALINK PROFESSIONAL 3.0: THE REVIEW

by Chris Holmes

I have run a BBS for almost 10 years. When I started, it was with Networks II on a 64K Apple II+. At that time, Networks II was considered "state of the art" and offered "modern" features such as private e-mail, Sysop chatting, and a public message area. Since then, communications have come along way and I have used many different BBS packages.

My system took the biggest step when I upgraded to a new software package from ResNova Software Inc., NovaLink Professional 3.0 for the Macintosh. What this software offers for a system operator is unequaled in the desktop BBS/Server industry: graphic user interface, sophisticated message editing features, a powerful user scripting language, networking, plus compatibility with hundreds of existing "externals" (also known as "plug-ins," or "doors" to our DOS friends).

Let's start from the top. The major feature of NovaLink is its versatile graphic user interface (GUI). ResNova's GUI allows users to access online information through simple icons, sounds, and pictures, instead of navigating through many levels of text based menus. Using the GUI also provides for multiple typefaces, sizes, and styles of text to be used within messages. And, unlike most graphical software packages available which are very rigid in their interface style (the Sysop cannot modify the "look & feel"), NovaLink is very flexible. A small application, dubbed "NovaMondrian" permits the BBS operator to build his or her own interface (icons, buttons, and all) from the ground up. Because of this, each NovaLink system can have a truly unique look. If an operator does not wish to put effort into a unique interface, the administrator can employ the built-in "NovaView" system. NovaView automatically creates a Finder-like environment for the BBS. The user will see message

forums and file areas as folders, and other functions as icons. The operator merely sets up the file areas and message forums, NovaView does the rest.

To access NovaLink in GUI mode, a user must dial in with a special terminal software package called "NovaTerm," which is available for both Mac and MS-DOS systems with support for RIP graphics. NovaTerm incorporates a special protocol that ensures an error-free connection even when not using a V.42 or MNP type modem. Another benefit of this protocol is simultaneous uploads and downloads, even while reading messages, sending mail, and using other functions of the BBS. If you have more than one file queued for transfer in either direction, a queue list will allow you to view the status of each file (similar to the Macintosh PrintMonitor which allows you to view the status of each print job waiting in a printer queue). To save on long distance fees, a simple off-line message creation feature lets users compose letters before they actually connect. NovaTerm comes in three flavors: Regular (for modem connections), Network (for network connections), and PPC (for local computer logons). NovaTerm also allows the user to choose which interface is actually seen when calling the BBS: the custom interface (if the Sysop has created one), or the NovaView interface.

If users do not have NovaTerm, they can log on to NovaLink with any regular terminal program. One of the strengths of NovaLink Professional, along with its GUI, is its completely customizable text interface. Each text screen can be independently composed, utilizing the full ANSI character set if needed. Using NovaLink's scripting ability, different menus can even be displayed to users with different emulations. A graphic imaging model named "RipScript" has also been developed by ResNova. RipScript allows callers with non-graphical systems (such as DOS machines not running under Windows) to get the same GUI point & click functionality common to graphics based operating systems while still using their favorite telecommunications software.

The messaging and text editing features of NovaLink are among the

best found online. In the GUI mode, a user writing a new message is presented with a window similar to that of MS Word. The top portion of the window is a toolbar which contains many useful features such as font selection, text justification, and font style. Files can be attached to messages simply by clicking on the "attach" button. The bottom portion contains the text editing window. Here, all the standard Macintosh text editing functions apply.

Message forums are especially powerful. Using a technique called threading, NovaLink Professional organizes messages by topic. Although other BBSs claim to "thread" messages, NovaLink does this in a way that makes sense. When a message is posted with a new topic, a new folder is started. All replies to this message are stored within that folder; new topics start a new thread. Using the GUI, this is exactly how it appears; a message forum is like a list of folders, each folder being a thread.

NovaLink also comes stock with a powerful scripting language, NovaScript, which allows the operator to easily add functions to the BBS that are not normally present. NovaScript is easy even for the "unprogrammer" to understand. It reads like English and is quite similar in structure to HyperTalk. Using this scripting ability, such items as online quizzes can be created with a minimal expenditure of time.

One of the most impressive features of NovaLink is its suite of networking capabilities. Each NovaLink package comes with a proprietary network exchange protocol built-in. This protocol allows for NovaLink to NovaLink exchanges of private mail, files, and public message forums. A ResNova sponsored network, InfoLink, is available for any NovaLink sysop to hook into. As an option, ResNova will offer NovaLink with an InterNet gateway. This gateway will allow any NovaLink BBS complete access to all UseNet message feeds and InterNet mail.

Another exciting feature of NovaLink is its ability to use "externals." Externals are programs that add functionality to any NovaLink BBS. These externals can range from online games to user maintenance utilities. And, because NovaLink Pro



IN ONE ERA & OUT THE OTHER

In order for your BBS to survive, your BBSware must be able to adapt to a growing and changing environment. Like the dinosaurs, some BBSware cannot feasibly evolve, so your BBS could become extinct.

Take **Tyrannosaurus Unix**, for example. T-Unix requires expensive intelligent multiport serial cards to support multiple lines, plus a powerful (and expensive) PC.

The **LANasaur** travels through distant LANs. Each LANasaur PC supports only one to four lines. The extra cost of the LAN hardware and the multitasking software is prohibitive.

There's the **Solodactyl**. Like the LANasaur, it uses multitasking software to support a few lines. After that, its growth is stunted.

All of these require high-cost hardware, expensive software or both. There's a new animal that is making these BBSware dinosaurs extinct.

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3.0 has evolved over some years (the first incarnation of NovaLink was originally written by a high school student), there is already a large base of externals available for use.

Setting up a NovaLink system is easy. Each BBS starts out as a blank "page". The operator selects functions from a toolbar and drags them to the page. Double clicking the icons allows for operational parameters to be set (i.e.: in the case of a message forum, the message expiration date can be set). In the case of a folder icon, a new "page" (which appears as a new window to the user) is opened. This folder can contain file areas, messages, externals, or any other function. Continuing on in this fashion results in a unique system, in only a few minutes. To create the customized interface, run "NovaMondrian" and build an interface for each page (window) of the BBS.

Administering the system is just as easy. All message forum and file area data are kept within any folder on the hard drive that the operator specifies. Thus, files and messages can reside on several different drives. Any mounted volume on the Mac's desktop can be used. As an added benefit, messages are stored in a single random access file. This is useful especially for BBSs with active forums — you don't end up with thousands of tiny files wasting precious space all over your hard drive. Within file areas, files are stored on the disk in their native format. As a Sysop, you can access the file directly from your hard drive — you don't have to logon to your own BBS to download it. To add files to the BBS, just drag them into the corresponding folder on the hard drive. The BBS file list is automatically updated!

An area that could use improvement on NovaLink Professional is NovaMondrian, the custom interface builder. In its current form, NovaMondrian creates small data files that must be imported into the NovaLink server application before a custom interface actually becomes active. This process would be much simpler if NovaMondrian were integrated right into the NovaLink server application. And for those who like to write externals, especially ones taking full advantage of the GUI, a

more complete toolkit would be handy. Many important graphics routines are missing from the current version. Also lacking on the external front is the ability to schedule events. No third party external can be set to run automatically at a given time. This greatly inhibits programmers writing externals to perform automatic user purges every night, running a disk optimization routine without user intervention, or other automatic system maintenance functions.

Overall, NovaLink Professional is a versatile, competent communications package capable of handling from the smallest hobbyist BBS to large and complex corporate systems. Other than some minor glitches, the product is quite stable and bug free. Also, direct support is available from ResNova's BBS where free software updates and bug fixes are available to registered NovaLink users.

Chris Holmes is product of Abbott Integration, a Vancouver, BC-based wholesale distributor of Macintosh-related peripherals including monitors, modems, video cards, and hard drives. To contact ResNova for more information, call ResNova Software, Inc. at **(714) 379-9000** (voice); **(714) 379-9004** (bbs). NovaLink Professional 3.0 requires an Apple Macintosh SE or later with at least four megabytes of RAM, running System 7.0 or later. A hard disk is also required.

WINDOWS CLIENT FROM FIRST CLASS

by Bill Gram-Reefer

SoftArc, developers of FirstClass BBS software for the Macintosh, has released its graphical client program that can be used on PCs running Windows. The FirstClass Client for Windows permits users to connect to Macintosh-based FirstClass servers via a network or by modem for instantaneous e-mail, asynchronous multiple-file transfers, cross platform chat, and conferencing. With features and functionality almost identical to the Mac-based client, FirstClass Client for Windows requires an Intel 386-based PC running Windows 3.1 or newer, with a minimum of 4 Mb of RAM.

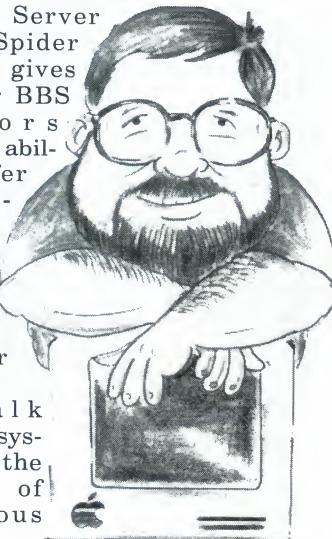
FirstClass Client for Windows operates on FirstClass systems running host version 2.4, which is freely available, but only when downloaded by any registered FirstClass owner. In addition to version 2.4 of the host program, sysops must also purchase the necessary program modules. In order to accept Windows logins via modem, FirstClass servers require the FirstClass Windows User Interface option (\$295) for unlimited users. Sites wishing to accommodate Windows users over a network require the Windows interface, plus the FirstClass IPX connection module available for \$495.

Freely distributable, those wishing to obtain a copy of the Windows client can download it from SoftArc Online, SoftArc's corporate support system at **416-609-2250**. The program is also available on CompuServe and America Online in their respective networking forums. Also available from the same sources is a freely distributable demo of FirstClass that runs under Windows. SoftArc Inc. Global-Area Communications, 805 Middlefield Road, Suite 102, Scarborough, Ontario, CANADA M1V-2T9, **(416)299-4723** voice; **(416) 754-1856** fax; **(416)609-2250** support BBS.

TELEFINDER ADDS FEATURES

Spider Island Software, maker of TeleFinder, a leading multi-line bulletin board system (BBS) for Macintosh", is now shipping Version 3.1 of its Group Edition Host software. With the addition of a Chat Server module, Spider Island now gives TeleFinder BBS operators (sysops) the ability to offer callers real-time, private messaging with other active modem or

AppleTalk nodes on a system, where the number of simultaneous



one-to-one sessions is limited only by the number of telephone lines supported by the Macintosh CPU. While online, users are able to view a list of current callers available for chat. Additionally, special chat rooms can be created where multiple callers can hold live conferences via a Chat Window that clearly identifies participants and displays a group's conversation, which can be logged and saved for review. Sysops can easily restrict and regulate access to any of these conference areas by assigning privileges according to groups and or individuals.

In addition, version 3.1 of the client software allows users to preview compressed, thumbnail PICT files and their captions online. This enables users to view files, compressed using JPEG or any other ANPA file-standard format, before they decide to download the file. Another important addition allows sysops and users to format text in both the messaging and conference areas. This new capability gives callers the ability to customize their messages in a variety of ways: by adding color, or in choosing any combination of font, size, and style commands.

TeleFinder 3.1, runs on all Macintosh computers from the Plus to the Quadras, is 32-bit clean, System 7 Savvy, can be fully controlled via AppleEvents for customized system integration, and includes full Balloon Help. With a retail price of **\$425** and available direct from Spider Island and through its authorized resellers, TeleFinder Group Edition Version 3.1 includes the full suite of BBS host program modules, user-access software with unlimited distribution license, and full documentation.

Spider Island Software, 4790 Irvine Boulevard, Suite # 105-347, Irvine, CA 92720; (714)669-0260 voice; (714)669-1383 fax; (714)730-5785 support BBS.

STUMP THE CHUMP

Most of you don't know this, but Santa Claus was a liberal arts major and, although he uses FileMaker Pro on his frocked Quadra system to keep track of the naughty and nice, he's still not very technically proficient

when it comes to bits and bytes. So, just to keep him sharp and up-to-date, I like to send him some of the tough, technical BBS questions you dear readers send me. That way Santa and his elves have something to ponder as they totter through the summer in Belize while knocking down an endless procession of Strawberry Margarita Slurpees. (Now you know why Rudolph has a red nose). And, just to make it really tough, I like to throw in the occasional cross-platform conundrum just to keep the big guy honest.

For instance, Dennis Spector, of Oakland, CA writes: "I'm the sysop of the Miata BBS running on a PC with Mustang's Wildcat BBS software. I know callers are concerned about keeping phone bills down to a minimum, and I usually suggest that besides using a long-distance service (such as Global Access or PC Pursuit), the best way to cut phone bills is by cutting down time online.

"I've come to really appreciate off-line mail readers for this reason. Most BBSs have a 'mail door' which allows a caller to logon to a BBS and download a compressed mail packet containing all new messages, a list of any new files, and any updated bulletins or newsletters, all compressed into a .QWK mail packer which requires the use of an off-line mail reader, like Mustang's OLX (Off Line Express) to decipher. In addition to allowing the caller to read all the new mail while off-line, mail readers also allow the caller to compose replies and new messages while off-line. Replies are compressed into a .REP mail packet which is uploaded to the BBS through the mail door. Usually uploading a .REP packet and downloading a .QWK packet only takes a minute or two, significantly reducing user phone bills. The problem is, I want to provide this same service to Mac users. Can you help me solve this dilemma?

Santa responds: "First, it's important to offer .QWK packet compression with PKZIP110. Using this older version will allow Mac users to unzip their mail with UNZIP101.SIT, then read their mail with a Mac off-line reader such as FREDDIE. If you offer these files to your Mac users it will also help to have STUFFIT LITE and COMPACT PRO so users can uncompress the .SIT and .CPT files."

Easy enough, North Pole U., but that was the 20-point toss-up. Now, here's you're bonus question from Bob de Violini of Oxnard, CA: "The basic question is this, 'Is there a means for a Macintosh computer to transmit the Function and Cursor Key codes generated by an IBM-compatible PC?'

"The situation is this. My wife and I run a PC-based BBS that contains the card catalog for the American Philatelic Research Library. The library itself is in State College, PA, and a second version of this BBS is being established here in Oxnard, CA. Our site is a test site established several months ago so we could learn the system and try to make it as simple as possible for non-computer techies to utilize.

"Called the Philatelic Lit BBS, the system runs on Wildcat! 3.55. It uses Doors to let users get into the catalog program and browse the holdings of some 12,000 titles so that they can leave a message asking that a particular title be sent to them on loan. To properly use the catalog program, the Function keys must be accessible on the caller's keyboard. QModem and Telix let the caller do this with a Doors toggle (ALT=); Procomm Plus does this in the IBM PC terminal emulation mode.

"We have a number of people who call in on their Macs, and though they can get into the catalog, they cannot move around in it or exit gracefully. If the sysop doesn't happen to be on hand top see what's happened and can take the caller back to the BBS menu, then about the only way out is to hang-up with an ALT-H command. Is there some procedure that we can advise our Macintosh clients about that will let them access this database. I understand that some Mac keyboards have function keys; perhaps they can be programmed for that purpose; but I'm not sure if other keyboards can be remapped. Any guidance that you can provide will be appreciated."

Santa responds: "This is a tough one, so I deferred to my elves who recommend the following: Don't use a PowerBook (ha-ha, just kidding; those elves are always trying to jerk my chain). Their overall opinion is your users must be using non-ANSI, rock-bottom shareware instead of more fully-featured products. Keyboard remapping utilities are available that

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can indeed reassign keys and combinations for specific custom purposes. The problem is trying to redefine W, A, Z, and S to replace up, left, down, and right can get a little dicey, especially if your name is WAZ. Have your callers use an Apple-compatible extended keyboard that includes the function keys. In concert with Quick Keys they should be able to map the commands safely. Alternatively, some commercial telecommunications packages for the Mac offer a keypad simulating DEC VT100 mode, allowing access to some otherwise unattainable commands. Freesoft's White Knight telecom package, for instance, lets users employ macro keys to map commands. Another alternative provided by White Knight version 11.14, is its VT status bar that has all the commands on screen as push buttons that users can access.

Thanks to Santa and his many elves, two tough dilemmas in the ongoing struggle for cross-platform connectivity have been solved. So keep those cards and letters coming. And, don't make the questions too hard; cause if you do stump the chump, come Christmas, you just might get a lump of coal instead of that Quadra. Miata BBS, (510)658-0138; Philatelic Lit BBS (805)485-8811.

MAC BBS OF THE MONTH

Bud Grove writes to tell us that he runs the BBS for Hughes Aircraft, MacHACers Computer Club. They run two lines under Second Sight. Line one employs a USR Dual chopper. Loaded for bear, the system includes a 650 Mb optical drive, a Pioneer 6-deck CD-ROM player, and a 310 Mb hard drive keeping over 1,500 users happy since 1979 on an Apple II. Give them a call and check it out: (310)549-9640 bbs.

We were pleased to see the launch of DESIGNLINK, a BBS based in Walnut Creek, CA. Accessible by Macs and PCs running either DOS or Windows, DESIGNLINK intends to be a complete online resource for designers, publishing professionals, photographers, and artists.

The BBS features conferences for free job listings, technical help, legal advice, and professional counseling. Designers, artists, and photographers in the PHOTOLINK section can dis-

play their portfolios for online viewing or downloads using very low resolution thumbnails for security purposes. DESIGNLINK also has a wide selection of shareware applications including fonts, utilities, music, and graphics files. By January 1994, according to Ash Mehta, the system administrator, DESIGNLINK will also support an Internet gateway for global e-mail and file transfers. Access is free for 30 minutes per day. Other plans for more daily time allotments are available for a reasonable fee.

While the BBS offers photographers and others space to display their work, DESIGNLINK does not act as the artist's agent. If you like what you see, you can contact the photographer directly. In addition to photography, the BBS is interested in showcasing portfolios from other artists including illustrators, designers, and other commercial artists. Art displayed in the PHOTOLINK and other sections is NOT public domain or shareware, being the property and copyright of the artists. Use without the permission of the artist is against the law.

The premise here is that art directors and designers in need of photographers or illustrators can view photos online, like Mr. Phelps in Mission Impossible, when he determines which special agents he'll use for each week's episode. More than a half dozen photographers with many national credits had already signed-on when we took a look at the board in early June. The response, according to Ash, has been tremendous, while the California Lawyers for the Arts has already rented a folder for its own organization which features a workshop and library in addition to private conference areas.

In addition to PHOTOLINK, the BBS offers VENDORLINK, PORTFOLIOS, MAC FILES, LEGAL, WINDOWS, HELP, AND DISCUSSION folders. The MAC FILES, include sub-folders for fonts, demos, graphics, multimedia, page layout, word processing, utilities, modems, updates, music, and more.

The payment plans, themselves offer intriguing possibilities. Besides the free, 30-minute-per-day plan, subscribers can sign-up for an hour or two of access time per day for \$50 or \$100 dollars respectively. Plan C, for \$500 a year, with an introductory discount at \$250 provides even more intriguing

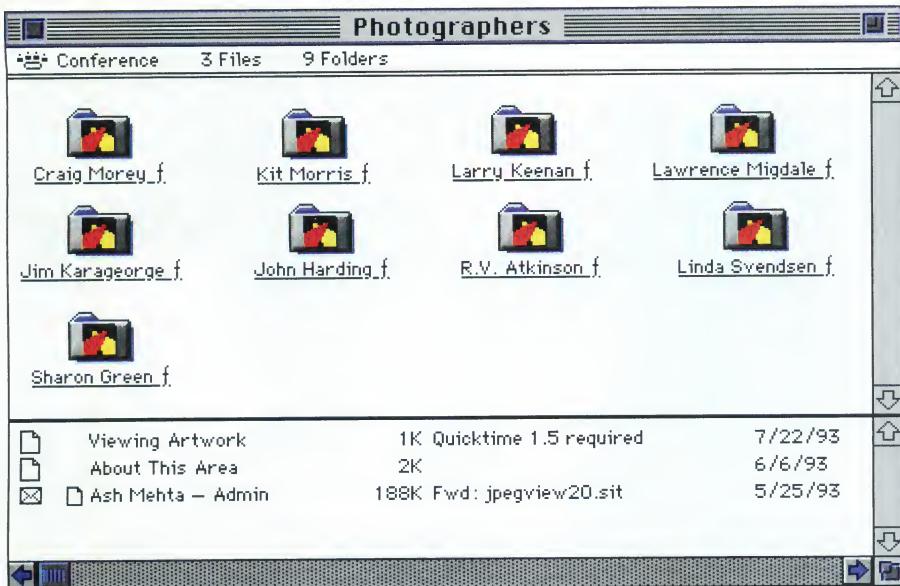


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possibilities. For this paltry sum, you get a folder on DESIGNLINK to do with as you wish. Your company could use this folder as its own BBS for customer support, 24-hr. tech support, or use it as an inexpensive e-mail system. Alternatively, artists, photographers, cooperatives, or stock agencies could display artwork (in very low resolution) for callers to peruse as a form of advertising or previewing of work by potential clients.

One of the few BBSs I've seen that actually has a merchant account for Visa and Mastercard, DESIGNLINK is a smart concept and well executed—so far. Renting space to allied organizations, service providers, and commercial interests makes a lot of sense and more fully takes advantage of the BBS technology available for the Mac that actually lets you run many BBSs through one system by controlling paths and privileges or access to particular folders. \$500 for a year's worth of access to Internet e-mail and your own folder to run your business BBS approaches "steal" territory, and I imagine that if local concerns don't take advantage of this quickly, the price will go up.

But, unless DESIGNLINK looks into 800, 900, or X.25 access, I don't believe it will attract the critical mass of art on hand if photographers and other dirt-poor, children's-book illustrators have to pay long-distance fees to upload their work. That chicken-egg problem could militate against big-time agencies keeping accounts to keep track of new artists. It would seem that having your portfolio built up in the first place is the key to taking advantage of such a service. It will be interesting to see if the BBS works



PHOTOLINK Menu to access Portfolios

out any distribution rights for stock images from specific artists, groups, or syndicates along the lines of a Wieck Photo Database. DESIGNLINK, 2034 Montclair Circle, Walnut Creek, CA 94596; (510)934-7355 voice; (510)933-9676 BBS.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. Bill has been writing about Macintosh computers since 1984. Email Bill at: wk05156@worldlink.com

GRAPHICS ONLINE

UNDERSTANDING JPEG OR "HONEY, I SHRUNK THE PICTURES"

By Jim Thompson
Western News Service

Working with high quality color images is not all fun and games. The initial excitement of capturing and manipulating full color images and photographs is soon tempered by the many challenges and difficulties that are part of the equation.

One of the biggest problems is dealing with the large file sizes such images require. A high quality 24-bit,

full-color photo typically requires approximately 4-megabytes to 7-megabytes of disk space. An image suitable for publication in a high-gloss magazine can take up as much as 30-megabytes of disk space!

If you are offering such images on a BBS, the problem becomes major. A 1-megabyte file requires approximately 15 minutes to transmit at 9600 baud. That means approximately an hour and 45 minutes to transmit a 7-megabyte file!

Fortunately, there is an answer — JPEG image compression. A 1-megabyte image that is compressed at a ratio of 10:1 using the JPEG standard would, typically, take only 90 seconds to transmit at 9600 baud. It would take less than 11 minutes to transfer a 7-megabyte file compressed under JPEG at 9600 baud.

You should be aware that there is a difference between image compression (such as JPEG) and data compression (such as PKZIP, STUFFIT and STACKER).

Under data compression, it is assumed that all data is critical, so nothing is lost during the compression process. This is known as lossless compression because the data is simply stored in a more compact format. You can use data compression on images but the savings of space is only marginal. Normally, the file can

be reduced by 10% to 20% but it can go as high as 50% if the image has large regions of the same color. This may sound like a lot, but considering that high quality images will be approximately 8-megabytes, a 20% savings still means a file that is 6.4-megabytes.

Image compression, like JPEG, is much more complex and more efficient. Image compression programs must be able to reduce file sizes by up to 99% which means a certain portion of the image will be lost. This type of compression is called lossy because it eliminates some of the "unnecessary" data without, at least in theory, affecting the overall quality of the image itself.

JPEG stands for "Joint Photographic Experts Group" which is a joint committee of the International Standards Organization (ISO) and the Consultative Committee of the International Telegraph and Telephone (CCITT) standards associations. The core committee members are from leading image processing and computer companies including DEC, IBM, Mitsubishi, Kodak, NEC, and Siemens.

Working with some of the top technicians in the world, this group has



**Jim Thompson
and his Hat "Marlboro"**



WOMAN1.JPG 62,440 Bytes



WOMAN2.JPG 151,345 Bytes



WOMAN3.JPG 246,173 Bytes



WOMAN4.JPG 597,972 Bytes



WOMAN.TIF 8,019,228 Bytes

developed a standard for the compression and decompression of continuous tone images which is known as JPEG.

JPEG compresses images by removing redundant data and data to which the human eye is less sensitive. According to recent experiments, the human eye requires lower frequency information for visual understanding. This understanding lead scientists to develop the Adaptive Discrete Cosine Transform (ADCT) image compression method, upon which JPEG is based.

According to Storm Technology, one of the leaders in the development and application of JPEG, "ADCT quantizes high frequency image data less distinctly, so that the majority of coefficients, each identified with a given frequency, will have a zero value. Multiple, repetitive zeros can be expressed with fewer bits, thereby compressing overall image file size."

JPEG analyzes and recodes image file

data while economizing on bits. The bits removed are either redundant (because they describe the qualities of one pixel that also pertain to the range of pixels around it), or they contain visual information that can be eliminated without affecting image quality. These bits represent luminance (light intensity) and chrominance (color) values that have frequencies which fall outside the range of frequencies to which the human eye is sensitive.

What is means is that the JPEG process eliminates redundancy in an image during compression and attempts to replace the lost areas on decompression. While this is great in theory, the result is a loss of quality. You can compensate for much of this loss by selecting the amount of compression under JPEG. A photo that is destined only for on-screen viewing can use maximum compression (a ratio of 100:1). You can select a less drastic compression ratio for a photo that will be published. Generally, a compression ratio of 8:1 or less will

result in no perceptible loss in quality.

Also, once data has been removed from an image through the JPEG compression process, additional data will not be removed if the JPEG process is re-applied to the image. "JPEG will not remove any additional data—even if compression is applied over and over again—provided the image is decompressed and compressed again using the - initial compression setting," says Storm Technology.

The actual amount of compression will depend on the image in question. Visual information is distributed differently in every image. One image might have a complex, multicolored background that is difficult to compress without affecting quality, while another might have one background color with a lot of redundancy that can be compressed easily.

The speed of compression depends on several factors. The most important is

COMPRESSION COMPARISONS

Original file **WOMAN.JPG** was Scanned from slide using a Nikon Coolscan

File Size: 8,019,012 bytes
DPI: 145
Scan Resolution: 1,441 DPI
Transmission Time: 105 minutes

File Name:	WOMAN1.JPG	WOMAN2.JPG	WOMAN3.JPG	WOMAN4.JPG
Compression Level:	100	75	40	3
Compression Time:	120	115	120	130
Compressed Size:	62,440	113,368	246,173	597,972
Ratio:	128:1	71:1	33:1	13:1
Transmission Time:	.5 minutes	1 minute	2 minutes	6 minutes

Transmission time based on an average of 1650 cps on a 14,400 bps connection

the type of computer you are using. As always, the faster the processor, the faster the compression speed. On a 386/33 machine, it takes approximately 2-minutes to compress a 4-megabyte image at a ratio of 20:1. The decompress process takes approximately the same amount of time. A number of companies, among them SuperMac, offer a hardware solution. Their Thunderstorm Accelerator card, which sells for \$995, can speed up the compression process by as much as 500-percent.

JPEG MOTION COMPRESSION

A variation of JPEG, called MPEG (Motion Picture Experts Group), is also available for the compression of video images.

The goals of the two groups, JPEG and MPEG are inherently different. The JPEG standard is quality-driven, i.e. when working with still images, maintaining the highest possible quality during compression is the key goal. According to Storm Technology, "The MPEG standard is speed-driven, i.e. MPEG is optimized for CD-ROM applications, where data is compressed at 1.1 megabits per second. Video should move at 30 frames per second, and since images are shown in motion on relatively low-resolution monitors, the MPEG algorithm uses interframe correlation to deliver very high compression ratios while sacrificing image quality."

Under JPEG still image compression, every part of an image is examined. A decision on which information can be removed is made and then it is

removed. Under video compression the process is similar with the addition that an inter-frame correlation is conducted. This process consists of examining a sequence of video frames, comparing the changes from frame to frame, and then only storing the changes.

As a result, entire video sequences must be decompressed in order to view or edit one frame. With still image compression, on the other hand, images are stored as individual files, so they can be recalled and edited one at a time quite easily.

Video image compression is still in its infancy. The compression and, most importantly, the decompression process requires specialized hardware. Various accelerator and/or compression cards are available, but most still do not allow for full motion decompression.

Normal motion pictures run at 30-frames per second. Typically, a motion picture shown in a 160x120 pixel frame can be decompressed and viewed at 14-frames to 20-frames per second depending on the speed of the computer processor. But all this is changing and the day will soon arrive when full motion video compression/decompression will be widely available.

NEW STANDARD FOR WINDOWS

The JPEG standard is rapidly being adopted by both the publishing industry and the computer industry. In July, 20 leading multimedia software and hardware vendors agreed

to standardize on JPEG for bit-mapped images and compressed video data under the Microsoft Windows operating system.

JPEG still-image files will be supported under Microsoft Windows as device independent bitmaps (DIB) files, and JPEG video files will be supported under Video for Windows as audio/video interleaved (AVI) files.

The acceptance of JPEG means that hardware and software products running under Windows will work together seamlessly. This means better products and lower costs.

Vendors who have agreed to endorse the standard JPEG format include AMDRIX Software; C-Cube Microsystems; Cirrus Logic; Creative Labs; Dolch Computer Systems; Fluent Inc.; Intel Corporation; LSI Logic Corporation; Microsoft Corporation; Motorola; New Media Graphics; Optibase; SuperMac; Telephoto; Texas Instruments; Truevision; U-Lead Systems; Videologic; Xing Technology Inc.; and Zoran.

To give the technology an additional push, Microsoft is offering specifications on the JPEG file format to anyone who requests it.

WEALTH OF PROGRAMS AVAILABLE

If JPEG sounds like what you need, you will find a wealth of programs, both commercial and shareware, that support this standard.

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 **PCBoard**
Professional Bulletin Board Software

Clark Development Company, Inc.

For PC users, the top commercial programs include Aldus PhotoStyler, Adobe PhotoShop for Windows and Picture Publisher from Micrografx. For the MAC user, there is Adobe PhotoShop and PicturePress from Storm Technology.

Of these commercial packages, PicturePress is the only one dedicated to JPEG. In my tests, I found PicturePress to be the fastest of all the packages in both the compression and decompression process. It also compresses images to a greater degree than any other Macintosh program. Additionally, it includes a plug-in module for Adobe PhotoShop, so it can be accessed directly from this program.

The user's license also includes PictureDecompress. This utility program can be distributed at no cost with your compressed images. It

JPEG SHAREWARE

Image Alchemy - \$79.95

ALCH162.ZIP
Handmade Software, Inc.
15951 Los Gatos Blvd. Ste. 17
Los Gatos, CA 95032
(408)358-1292 voice
(408)358-2694 fax
(408)356-3297 BBS
hsi@netcom.com

CompuShow - \$25

CSHW861.ZIP
Canyon State Systems
PO Box 86
Sedona, AZ 86339
(602)282-5070 voice
76555.167@compuserve.com

Colorview - \$29.95

DCVIEW21.ZIP
Millennium Technologies, Corp.
649 61st Street Ste. 205
West New York, NJ 07093
71055.2625@compuserve.com

ImageFun - \$35

IFSE101.ZIP
Speedy Software
173 Franklin Ave.
San Gabriel, CA 91775
(818)280-8018 voice

WinJPEG - \$15

Norman Yee
58 Chandler Street
Boston, MA 02116
nyee@osiris.ee.tufts.edu

allows users to decompress and view the images and to store them in either PICT or TIFF format. Frontier Runtime (also included with the package) is a script language that allows for PicturePress to be run automatically in the background and for batch compression of images. PicturePress also produces thumbnails of the image so you can quickly identify the image before decompression. The ability to attach text (up to 32k) to the image means that you will always have full information about the image.

One of the best features of the program is selective image compression. This allows you to save selected portions of an image at different quality levels. For example, in a single image, the focal point could be saved using a high quality compression while a high amount of compression could be applied to a less important area, such as the background.

If you are a MAC user and need or want JPEG compression, you should definitely have PicturePress. Unfortunately, Storm Technology does not make a PC version.

The other commercial packages mentioned above not only include JPEG compression and decompression, but also offer most of the power of a color prepress system right on your own desktop.

PhotoStyler, PhotoShop and Picture Publisher all allow you to enhance, crop or color correct electronic photographs. In fact, they offer all the tools of a full-featured electronic darkroom. They will even convert your photos or images to or from a multiple of formats. In addition to JPEG, the supported formats are GIF, EPS, PCX, TIFF, TARGA, and BMP. They all also support the new Kodak CD format.

There are also a number of surprisingly sophisticated programs on the shareware front. They include: Graphics Workshop and Image Alchemy from Alchemy Mindworks, Inc. Both offer JPEG along with the ability to convert to and from various other formats including IMG, PCX, GIF, TIFF, WPG, MSP, IFF/LBM, BMP, RLE, Halo CUT and Targa.

If you are looking for more information about image compression, image

CONTACTS:

The JPEG file format can be obtained by calling Microsoft PhoneFAX server at 206/635-2222 or on the CompuServe WINEXT forum.

PICTURE PRESS

Storm Technology
1861 Landing Drive
Mountain View, California 94043
(800) 275-5734
(415) 691-6600
COST: \$199.00

PHOTOSTYLER

Aldus Corporation
411 First Avenue South
Seattle, Washington 98104-2871
(206)622-5500
COST: \$795.00 for version 1.1a

PHOTOSHOP

Adobe Systems, Inc.
1585 Charleston Road
Mountain View, California 94042
(415) 961-4400
COST: \$895.00 for the MAC (version 2.5)
COST: \$295.00 for Windows (version 2.5)

PICTURE PUBLISHER

Micrografx, Inc.
1303 Arapaho Road
Richardson, Texas 75081
(214) 234-1769
COST: \$495.00

GRAHPICS WORKSHOP & IMAGE ALCHEMY

Alchemy Mindworks, Inc.
P.O. Box 500
Beeton, Ontario, Canada L0G 1A0
(800) 263-1138
(416) 729-4969
Registration: \$40.00

SUPERMAC

SuperMac Technology
485 Portero Avenue
Sunnyvale, California 94086
(800) 334-3005
(408) 245-2202

SAMY'S CAMERA

Alan Adler & Jack Etzion
263 South LaBrea Avenue
Los Angeles, California 90036
(800) 321-4-SAMY
(213) 938-2420

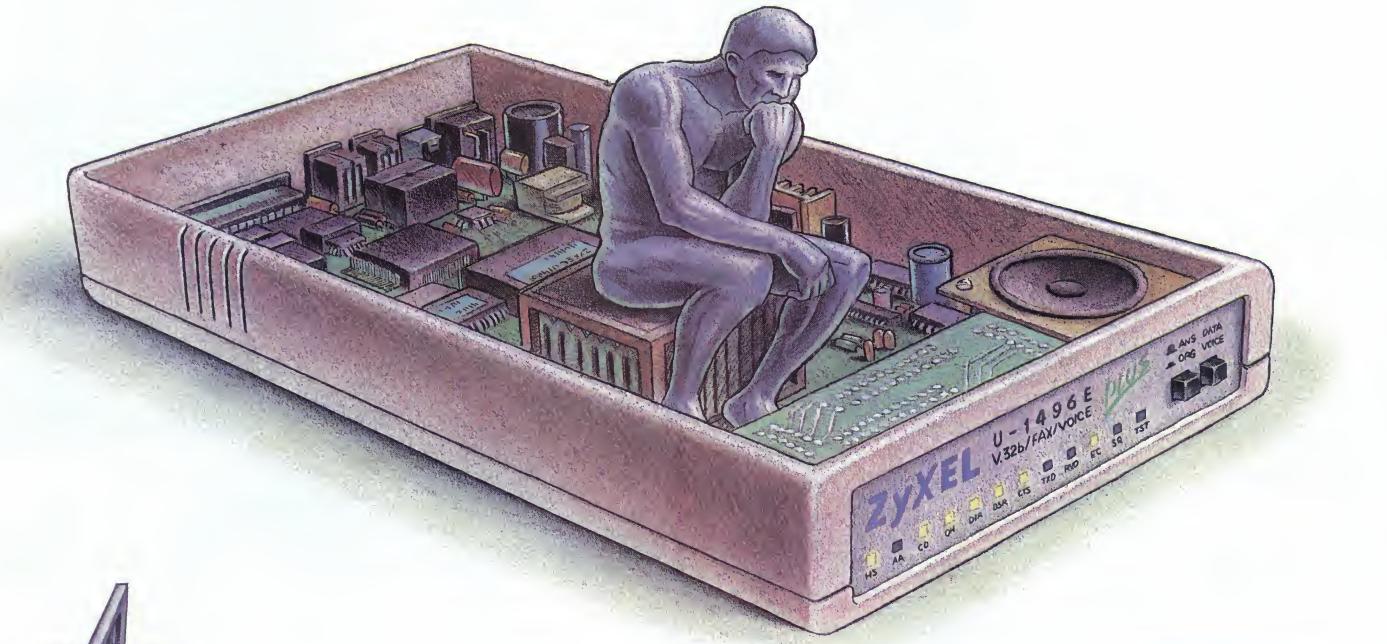
IMAGEN, INC.

504-1168 Hamilton Street
Vancouver, BC V6B 2S2 Canada
(604)687-7511
(604)687-1030 BBS

ITERATED SYSTEMS, INC.

5550-A Peachtree Parkway
Suite 650
Norcross, GA 30092
(800)4FRACTL
(404)840-0728

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February 1993

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JULY 1993

* Auto Data/Fax/Voice detection available on DOS™ version. Window/Mac™ version available with Auto Fax/Voice detection. Specifications are subject to change without prior notice. All trademarks are the property of their respective owners.

RIPscrip™

Add-on Option

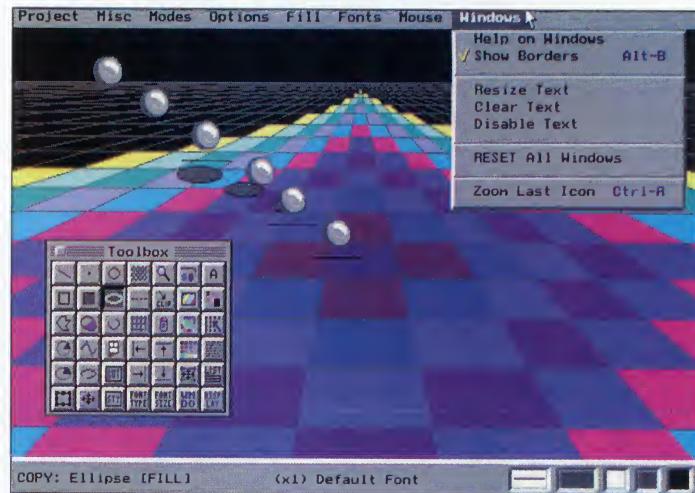
Expand the appeal of your BBS with a graphical user interface! Using our new RIPscrip Add-on Option for The Major BBS, you can amaze your users with spectacular EGA/VGA graphics that go way beyond anything you've seen on Prodigy or America Online.

You can create beautiful and intuitive screens with icons, buttons, pop-up dialog boxes, multiple fonts, and other Windows-like elements. With the click of a mouse, users can make menu selections, scan their mail, compose messages, and much more.

RIPscrip is a graphics protocol developed by TeleGrafix Communications, Inc. specifically for BBS applications. Unlike NAPLPS (the 1983 graphics standard used by Prodigy), RIPscrip is a whole new generation of online graphics technology, designed in 1992-93 with an emphasis on transmission speed, detailed hi-res graphics, and local caching of bitmaps and icons.

RIPscrip includes:

- a point-and-click BBS user interface with complete mouse support for icons, buttons, and mouse fields ("hot regions")
- simultaneous RIPscrip graphics in one window and scrolling ANSI text in another
- a full set of primitive graphical objects, such as pixels, lines, circles, boxes, polygons, bezier curves, beveled frames, and pie slices
- multiple, scalable vector and bitmapped fonts
- a sharp "button designer" with special effects (bevel, sunken, recess, chisel), multiple colors, justification of label text, and more
- zoom command and a pixel-by-pixel icon editor with masking and color replacement features
- full clipboard cut, copy, and paste commands
- color palette control, customizable fill patterns and line styles, text variables, and more



The floating toolbox in RIPPaint puts the most frequently used drawing commands just a mouse click away.

By installing the RIPscrip Add-on Option in your BBS environment, you instantly have access to the power of the RIPPaint drawing tool. It integrates smoothly with Menu Tree and the CNF configuration utility as a DLL, letting you edit graphics as easily as you would regular text. With a single keystroke, you can jump between the ANSI flavor of a message or menu and the RIPscrip version.

RIPPaint is a WYSIWYG ("what you see is what you get") GUI designer implemented as a paint program. Simply lay out your screen the way you want it to appear to your users — RIPPaint will take care of converting the scene to RIPscrip commands. Pull-down menus, context-sensitive help, a floating toolbox, an object editor, configurable grid snap, and other features let you quickly build professional graphics.

You can also use a stand-alone RIPPaint executable to generate graphic file pages and new icons and bitmaps. And because RIPscrip is actually a collection of 7-bit ASCII text commands, you can directly tweak and manipulate the output of RIPPaint with your favorite text editor.

The multi-lingual/multi-protocol architecture of Version 6.1 of The Major BBS easily supports both ANSI and RIP users online simultaneously. The *RIPscript* Add-on Option includes an "English/RIP" set of messages and menus to get you started. You can use these as they stand, edit them, or create your own.

The *RIPscript* Add-on Option also includes *RIPterm*, a complete graphics terminal program that interprets *RIPscript* commands sent by your BBS. You can provide this program free of charge to your users — distribute it on disk or make it available for download. It supports a pull-down menu interface, ZMODEM file transfers, a Doorway mode, full ANSI emulation, keystroke macros, and more.

When users call your BBS with *RIPterm*, your BBS can "auto-sense" RIP, and immediately begin displaying graphics to them. Or, you can prompt users to choose their language and/or presentation protocol at connect time.

One of the unique capabilities of *RIPscript* is support for icons and bitmapped images. Icons are stored on the user's hard drive and can be quickly displayed with a simple *RIPscript* command. A collection of standard icons and bitmaps are included with *RIPterm*, or you can design your own and let your users download them from the File Library.

Buttons are the best way to present choices to your users, and *RIPscript* gives you incredible flexibility with them. You can use icons or create dynamic buttons with configurable colors, hotkeys, and special effects such as exploding buttons, 3-D sunken and recessed attributes, dropshadow labels, and variable bevel sizes.

Radio buttons, check boxes, and pop-up pick lists are also built into RIP, as well as host commands to check the time/date stamps of files on the user's end, get the mouse location and button status, query the current version of *RIPterm*, sound off beeps and bells, create "user variables" to store temporary information, and more.

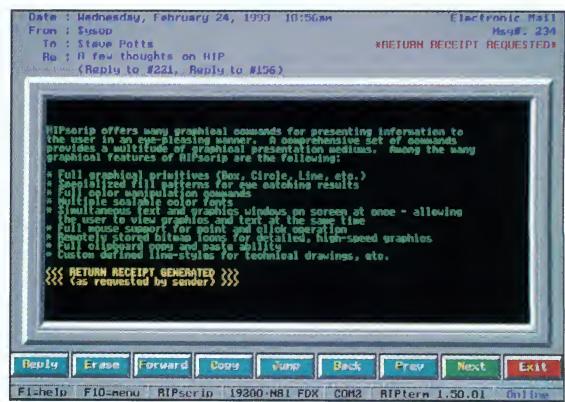
Join the graphics revolution! The *RIPscript* add-on includes everything you need to get started — the Sysop paint tools, a free-ware graphics terminal program (*RIPterm*), and a bunch of sample screens and menus to make your BBS graphical right away.

To order, see your local BBS software dealer, or call us direct at 1-800-328-1128 (international inquiries please call 305-583-5990).

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The *Button Designer* in *RIPpaint* lets you quickly create crisp point-and-click menu options.



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capturing or the latest in hardware, one of the best places is Samy's Camera in Hollywood, California. Besides being great guys, Alan Adler and Jack Etzion in their electronic imaging department are two of the most knowledgeable people in the field.

CONCLUSIONS

JPEG is rapidly becoming a standard for the transmission and storage of high quality images. However, this does not mean it is the best method for all applications. When storing and transmitting images that are ultimately destined for publication in a newspaper or magazine or in applications where a high quality output is required, JPEG is as good as it gets. Although there is loss in the compression process, this can be minimized because of the ability to select the compression level. Also, JPEG viewers are plentiful and cheap. With the acceptance of the JPEG and MPEG standards for the Microsoft Windows operating environment by 20 of the major computer corporations, JPEG will soon be available to virtually everyone.

However, when it comes to "on-line viewing" where highly compressed images are required, the best method I have seen is "fractal compression" as developed by Iterated Systems, Inc. and implemented by Imagen, Inc. in their Fracterm program. (See the May, 1993 issue of *Boardwatch Magazine* for a full explanation of fractal image compression and a review of Fracterm.)

For an on-line environment which allows for "real-time" image viewing, it is necessary that images be very small (10-25k). This allows for quick downloading and display. A JPEG image of such size is of marginal quality. Generally speaking, a 20k JPEG image would look fine if it filled no more than one-fourth of a 14-inch monitor. The quality of the image would noticeably decrease as the image size was increased.

When displaying an image "on-line" this means either a larger file size for an image that can be "downsized" without loss of quality or it means providing several copies (each of a different size and resolution) of the same file. This is not the case with fractal compression.

Fractal image compression has the advantage because it is "resolution independent." If you want to display an image on a larger monitor (for example, a 19-inch display) the fractal image will expand to fill the entire screen without the need to increase the file size of the image.

We use both JPEG and fractal on Marlboro Racing News. Callers go to the fractal area for on-line viewing of images. This allows them to actually see the photos and caption text. After selecting the image or images they want, the caller can download the more robust JPEG image (approximately 250k). When uncompressed, this image expands to approximately 5-megabytes and is suitable for insertion into a newspaper or magazine.

HOW THE IMAGES WERE COMPRESSED

All five of the images were compressed using Aldus Photostyler running on a 386/33 with 16-megabytes of RAM. When compressing with JPEG, a slider bar with a range of 1 to 100 allows for varying levels of compression. Image quality decreases as the compression increases. A compression level of 1 yields the least amount of compression but the highest quality. A compression level of 100 yields the highest possible compression but the least quality.

EDUCATION LINK

by Bill Gram-Reefer

FrEdMail Offers BBS Package Based on ResNova's NovaLink Pro Following a May announcement, the FrEdMail Foundation, in partnership with Irvine, CA-based ResNova, and educational technology consultant Raymond G. Harder, continues its plans to introduce a turnkey BBS package to schools based on ResNova's NovaLink Professional host and client software for the Macintosh. With five schools slated to begin testing the package in September, the system has been designed to give students and teachers access to all of the acclaimed FrEdMail and SCHLnet news groups, mail, and curriculum development services without limitations.

By using NovaLink Professional as the basis for the system, multiple users will be able to access the Foundation's services directly by modem or across local or wide area networks using AppleTalk, Ethernet, or TCP/IP. Users can access information or electronic mail from a friendly Mac graphical interface. Or, by teaming up with Telegrafix Communications Inc., ResNova has also provided DOS and Windows users with an easy-to-navigate graphical interface based on RipScript, an emerging industry graphics standard. Current FrEdMail call-in methods and platforms will not change. Because the system will support terminal windows and the VT100 protocol, Experienced FrEdMail users not using the graphical systems will see virtually the same "ASCII-like" system they have become comfortable with.

Attempting to provide an affordable plug-and-play communications package, the specially designed NovaLink BBS will be totally compatible with existing FrEdMail formats. The package consists of NovaLink Professional host software capable of supporting two telephone lines providing access by up to five AppleTalk nodes, supporting 25 users. TCP/IP connectivity tools are included for Internet access to SCHLnet. Pricing for this standard package is pegged at **\$799**. By purchasing an upgrade module the system will support 40 AppleTalk nodes and unlimited users for a total package price of **\$2,500**. The FrEdMail Foundation will continue to provide its high-quality content services and domain addressing for an annual fee of **\$250** for access to FrEdMail, all associated news groups, and SCHLnet. Additionally, the FrEdMail Foundation manages all of the news groups, supervising the electronic hallways for compliance to the rules of engagement.

"It may not be as sophisticated as a Microsoft Mail," noted Al Rogers, president of the FrEdMail Foundation, "but with point and click ease-of-use, and multi-user access to the FrEdMail services, it's an attractive offer. We are impressed with ResNova's technology, customer service, and commitment to and interest in the educational market."

In addition to news groups, and mail, teachers have access to the FrEdMail curriculum projects where they can seek customized assistance for developing lesson plans for students using computers in the classroom. Additionally, via NovaLink's TCP/IP connection capability, subscribers will have full access to SCHLnet, which takes advantage of Usenet transport protocols to deliver distributed conferencing to educators from around the world. SCHLnet uses Usenet format news groups to create mini-usenets specifically targeted to K-12 teachers and their students. SCHLnet offers an interactive flea-market of ideas, resources, opportunities, and information of specific relevance to teachers and students. Because SCHLnet's audience includes young children, it prohibits

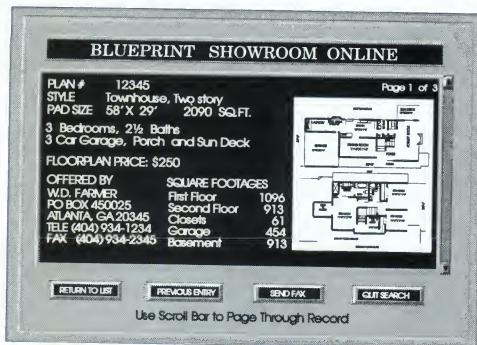
profane, discourteous, abusive, racist, sexist, obscene, and sexually explicit language within its news groups, the sometimes offensive distractions posed by some of Usenet's careless users intent on making "freedom of speech" an annoyance. SCHLnet takes care of most of the typical "noise control" problems found on Internet news groups by actively moderating the groups, and by moving your listserv and group mail topics out of personal mail boxes and putting them into the SCHLnet conference area, organized by topic, and ready for browsing when you are ready. Your mailbox is used only for personal correspondence.

The FrEdMail Foundation is a California non-profit organization sponsoring electronic mail, and edu-

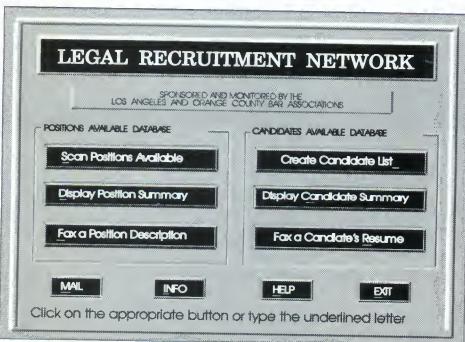
cational conferencing. In addition to FrEdMail and SCHLnet, the organization offers Telesensations: The Educator's Handbook to Telecomputing, its newsletter FrEd News, and a variety of training videos.

For further information on NovaLink Professional contact Daniel Link at ResNova Software (714)379-9000 voice; (714)379-9014 fax; (714)379-9004 bbs; Res.Nova AppleLink. To contact Raymond G. Harder Consulting, call (909) 983-4713 voice; rharder@eis.calstate.edu Internet. To contact Al Rogers and the FrEdMail Foundation, call: (619)475-4852 voice; arogers@bonita.cert.fred.org Internet.

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ATTENTION EDUCATORS

The focus of this column is to report on BBS and network applications at work in schools from K-12 through graduate-level universities. Help educators and students get wired! Let us know how your educational institution is putting BBS technology and networks into action. Please let us know about specific, innovative applications you use, or your school's involvement in corporately-sponsored programs. I'll report on the most interesting resources, issues and programs you send to: SCHOOLS ONLINE c/o 2069 Highland Drive, Concord, CA 94520.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. E-mail Bill at: wk05156@worldlink.com

ACCESS TO GOVERNMENT

LEGISLATIVE INFORMATION FOR CITIZEN PARTICIPATION

by Jim Warren

We were told in school that our government was by the People, for the People and of the People. But many of us think it has become government by career politicians, for special interests and of the bureaucrats. Most just snarl and try to avoid it, whine when they are forced to face it, and say ya can't fight city hall. But we can; all it takes time and effort.

And networked computers are the potent weapons for achieving and defending freedom into the 21st Century. Begun perhaps appropriately on July 4th, this column concerns practical [electronic] access to public information, government decision-making and to effective political action. First, some principles, then generalities and finally some specifics — and many more in future columns.

Some principles of [21st Century] freedom:

- Timely [electronic] access to useful information is the foundation for

sound decisions.

- Mass [electronic] communications are the essential tools for successfully pursuing change.

- [Online] citizen access to [computerized] government information is an absolute prerequisite for a free society.

Government Records Access

Government maintains the largest repository of information essential for societal decision-making. And, it's said that by the mid-'90s, the majority of government records will be computerized — to aid governmental operations and efficiency.

But, there remains major controversy surrounding who — outside of government — will have access to what records, in what time-frame, distributed where, for what uses, in what forms — and most especially, for how much cost.

Most states have "open government laws" including Public Records Acts (PRAs), and the feds have the Freedom of Information Act (FOIA). These mandate public access to government records, although with numerous exclusions.

Most open records laws however, focus on permitting citizens to examine [paper] records and receive paper copies, regardless of their often-computerized internal form. And paper is the least-useful form of information storage — all one can do is read paper records (and perform environmentally-unkind acts with them).

The Data Wars

Although we rarely notice the gunfire, electronic access to these government treasure troves are major battlefields. And most of the war will be concluded before the end of the decade.

The outcome will go far to determining whether we have a free society where citizens have a reasonable opportunity to be fully informed and



Jim Warren

effectively participate, or one where only corporations and well-healed hustlers will have timely, useful access to government — with most folks remaining obedient, ill-informed, drones, occasionally exercising delusions of democracy in well-orchestrated elections separated by numerous ineffective outbursts of frustration.

The maneuvering armies include:

- Funds-hungry government agencies.
- The information industry, especially the online database purveyors.
- The RBOCs — the regional Bell [telephone] operating companies.
- Many of the larger cable operators.
- A few broadcast license holders.
- Some cellular operators and radio manufacturers.
- State and federal regulatory agencies (PUCs, FCC, etc.).
- Some database and GIS [geographic information system] software vendors.
- Personal-privacy advocates.
- A few consumer and good-government advocates.

And there's one more notable army:

- The 10- to 20-million users of interconnected computers — a growing force that is irresistible, when it acts.

Some posterior-protecting politicians and bureaucracy barons treat these

computer-wielding citizens as Mongol hoards; as malcontents arrogantly seeking to be informed participants in their own governance — and through fear or fury attempt to pull up the data-drawbridge before the serfs can enter their turf. But most agencies appear to be quite willing to grant the public electronic access — provided their off-budget profits are sufficient [they call it revenues]. I.e., they're willing to perform as desired; they're just haggling over the price.

The info-turf being coveted includes:

- Legislative, executive and judicial records.
- Federal, state and local records.
- Text, database, graphic and geographic information.
- Control of access.
- Control of distribution.
- Control of use.

Legislative Data: The Key

Sovereignty — power — ultimately always rests with the People, but only when they act in concert, which requires information, communications and coordination.

Okay, recognizing that our connected thinkertoys can fulfill those prerequisites, consider the impact on legislation — the legal form for exercising our power.

Convenient, timely access [online] to full information about legislation-in-process, priced no greater than its incremental distribution cost [near-nil], available in useful form [computerized], can empower informed, effective citizen participation in the legislative process — that is simply not functionally possible when information is only available via paper records delivered [eventually] by snailmail.

Adequate online access permits:

- Access at all times on all days.
- Electronic copies at less cost and delay than paper information.
- Independent citizen access to complete records — not just evening sound-bites or all the news that fits.

• Indexing and searching bills, amendments, analyses, minutes, schedules and votes for items of interest.

• Cross-referencing to diverse related online and archived information within and outside of government sources.

• Extracting and circulating items to as many or as few people as desired, often within only minutes or hours, at little or no cost to the transmitter or recipients.

• Tracking amendments almost as quickly as can lobbyists, legislators and bureaucrats.

• Remaining automatically-notified of new legislation and amendments containing "interesting" words or phrases.

• Providing timely legislative information-access to those with impairments of hearing, vision, dexterity or mobility.

Using the public networks for timely access to legislative information and to each other can permit the People to retake much of the power that is currently limited — by lack of access — to Beltway Bandits, capitol hustlers, lobbyists, etc.; i.e., well-organized special-interest groups that can get the information and organize their actions.

Example: California Legislative Data

If Assembly Bill 1624 authored by Debra Bowen (D-Torrance) becomes law, California may become the first state to offer public access via the public nets to almost all public legislative information [already-computerized] — including the state codes [statutes] and voluminous State Constitution.

Implementation would require little more than a **\$5,000** file-server with a gigabyte disk and a **\$2,000** network connection that will cost about **\$200** per month to operate. Since prorating those costs across perhaps a million potential users would be orders of magnitude less than the expense of billing and collection, AB1624 mandates that the state charge nothing for this access.

[Full disclosure: Bowen introduced the bill without implementation details, mandating only public access by computer modem. I drafted a 15-page analysis and implementation pro-

posal and have assisted with much of the amendment language that would require its use. However, I have no business or financial interest in its outcome; just a great civic interest.]

There have been no official opponents of this bill. However, some of the Legislature's most powerful insiders — unelected, profit-seeking bureaucrats — have been fighting it with misdirection, foolish fears, misleading information and even by providing flat-out false information to legislators and their staff.

For snailmailed details of AB1624, contact Hon. Debra Bowen, State Capitol, Room 3126, Sacramento CA 95814; (916)445-8528; fax (916)327-2201.

The only thing that has kept this legislation afloat has been massive public support in the form of letters and faxes generated almost entirely from the nets. [Note: Phone calls are nice, but count for very little in persuading other legislators.]

Emailed details, updates and action-alerts are available from jwarren@well.sf.ca.us.

FidoNet and other nets' access

If AB1624 passes, it will be implemented using an Internet file-server. That would make the files directly available to all users of 1.4-million Internet host computers.

FidoNet gateway operator Tim Pozar, who created UFGATE connecting the Internet to FidoNet, has already said that he will provide free access for FidoNetters if the state will provide free access in the first place.

Thus, 700,000 to a million Californians (and 10- to 20-million net-users, worldwide) who already have direct or indirect Internet access through work, schools, universities, FreeNets, libraries or low-cost personal accounts — for the first time — would have timely, comprehensive access to California legislative information.

America Online (AOL), Compu\$erve (CIS), General Electric's GENie, Delphi, MCImail, etc., [but not Plodigy] all have gateways to the Internet and could provide their customers with access, if they choose to do so.

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Netvolks in all states can initiate and push through similar legislation.

Next month's column will address various specific issues and problems that surround online public access to any state's computerized public legislative records. Later columns will address local access and federal access — to decision-making processes as well as to data — and address how to use networked computers to impact those decisions.

Jim Warren is a columnist, lecturer, organizer and member of the Board of Directors of Autodesk, Inc., a \$440-million software company. He founded and chaired the First Conference on Computers, Freedom & Privacy (1991) and the early West Coast Computer Faires (1977-1983), drawing over 47,000 people in '83. He was a first-year recipient of the Electronic Frontier Pioneer Award (1992).

He began working as a programmer in 1968 after ten years as a math teacher and professor, and has been involved in personal computing since before the phrase was invented. He was founding Editor of *Dr. Dobb's Journal* (1976-1978), founding publisher of *InfoWorld* (1978-1979), founding host

of PBS TV's "Computer Chronicles" (1981-1982), founding Editor & Publisher of the *Silicon Gulch Gazette* (1977-1986) and founding President of the Microcomputer Industry Trade Association (1978). He has chaired ACM, SIGMICRO and SIGPLAN chapters, and served on numerous IEEE Computer Society conference committees.

He was also an elected community college district Trustee (1985-1989), editor and publisher of a rabble-rousing Peninsula Citizens' Advocate occasional newspaper and General Secretary for three terms of the "alternative" Midpeninsula Free University in the hippie '60s.

Jim holds graduate degrees in EE-Computer Engineering (Stanford), Medical Information Science (UC Med. Ctr.-San Francisco) and Mathematics & Statistics (UT-Austin) and finished all but his dissertation for a Ph.D. at Stanford.

He may be contacted at 345 Swett Rd., Woodside CA 94062; (415)851-7075; Internet:

jwarren@well.sf.ca.us.]

LEGALLY ONLINE

THE POWER OF THE COMPUTER BULLETIN BOARD



The recent film *The Player* portrays Hollywood screenwriters as a sorry lot. They submit their careers meekly to the inane caprices of film studios and producers, the tedium relieved only by the occasional frustrated psycho.

Based on recent BBS events in Tinseltown, reality may go the movie one better. Writers hoping for work in Hollywood need to join a union called the Writers Guild of America West (WGAW), because it holds an exclusive contract with the major producers known as the Minimum Basic Agreement. The Minimum Basic Agreement, or "MBA", controls the pay scale, working conditions, and most other aspects of every writer's deal with the studios and producers. And the guy who represents the writers on all MBA matters is the executive director of the WGAW. As it turns out this hired hand, this union administrator, has wielded more power over the collected writers of Hollywood than the most powerful and despotic studio boss.

WGAW's current executive director, Brian Walton, has not worn the mantle of power with an excess of grace. According to WGAW member and activist Fred Haines, Walton compromised the WGAW's position on

almost every major industry issue in the past ten years, all in the name of a don't-make-waves agenda lovingly termed "industrial harmony." For instance, Walton settled a contract dispute with producers in 1985 by agreeing that guild writers would not take a cut of videocassette royalties. Videocassette revenues soon afterwards became a major source of revenues for the entire film industry, and the writers saw barely any of that money. Similarly, in 1988 Walton agreed that the writers in his union would not get royalties on foreign sales of American films. Haines claims that this cut writers out of one of the most lucrative of all modern U.S. industries, a film export industry currently running a foreign trade surplus of over 4 billion dollars. In between crafting these wimpy deals, Walton set up a "contract Adjustment Committee" within the WGAW charged with supervising changes to the MBA. This group fulfilled its role admirably while belying its name, making no "adjustments" at all to the MBA for seven years stretching from its formation to the present.

Walton had no trouble getting his way. Through his control over WGAW's newsletter and all other channels of communication, his every concession to the other forces of Hollywood was presented to the writers as a fait accompli. Who had the time to second-guess the executive director? Most WGAW members scrabble for writing gigs full time. The eleven WGAW members on the Board never made much difference, either. When a new guild problem came up, the executive director presented them with stacks of paper to wade through on their own, together with his own bite-size solution ready for approval. Approval readily granted. The executive director, paid to spend his time on the guild's business, was the only one who could afford to deal with the guild's business. He ruled by fiat.

About five years ago, WGAW set up a computer bulletin board for WGAW members only. It was devoted largely to the conduct of official WGAW business, but also served as a social meeting spot for WGAW members. Official forums included the WGA Talk Forum, devoted to union politics and business; the Executive Director's Forum, where Walton

answered questions from union members; and the Announcements Forum, where meeting dates and agendas and other important notices were posted to the membership. Business-related forums included the Business of Writing Forum, the Craft of Writing Forum, and the Featured Writer Forum, with a monthly guest writer of some achievement in the Hollywood writer community. Finally, there were purely social forums dealing with subjects like sports, restaurant reviews and the BBS itself.

As the WGAW BBS grew more popular, a new level of awareness of union activities arose among the membership. Haines says that about 1300 of the WGAW's 8000 member writers eventually logged on to the board. They started learning about new union developments before the executive director dumped his version of the news in their laps. They filled in the gaps in each others' knowledge, discerning the real problems and opportunities faced by the WGAW, as opposed to the filtered version presented in the Board-controlled newsletter.

Following awareness came action. In a dramatic break from their tradition of accepting the smallest of crumbs from new film industry opportunities, WGAW members coordinated to take advantage of the latest such opportunity: interactive video productions. Normally, WGAW members would be barred from such work. Interactive video is being developed largely by producers who are not signatories to the MBA, and "Rule 8" of the WGAW bars union writers from working with non-MBA producers. But by achieving consensus within the union through discussions on the BBS, WGAW members pressured the Board to suspend Rule 8 and enable union members to get work in the interactive video arena. The union structure itself is also changing. In the past, union members were not able effectively to propose alternatives to the slate of Board directors proposed by Walton at each election. But through the power of the BBS, union members who differed with the Board organized sufficient votes to defeat incumbent directors at their last two elections.

The BBS organizers' swelling voices

were not received with great unanimity by the traditional ruling structure of WGAW, especially Mr. Walton. The computer BBS started as a low-cost, high-tech experiment bound to appeal only to the technoweenies of the union, but it grew into a Frankenstein's monster threatening to engulf the entire union in a wave of democracy. The power elite responded at first with selective censorship, deleting BBS messages by those most outspoken in their criticism of the union's leadership. Complaints about the censorship arose, which caused the censorship to increase, surging to as many as 200 messages deleted in a single night.

With resistance rising, the Executive Director took things to the next stage by mailing WGAW members a written agreement, which they were told they must sign or lose their BBS access. The agreement provided, as a fundamental condition of BBS use, that union leaders could remove or censor BBS messages for virtually any reason at all. It also provided that if any members had disputes about how the BBS was operated, they must take it to arbitration before an arbitrator chosen by the Executive Director. That would lead to an interesting arbitration, especially if the union member in question was complaining about the Executive Director himself.

The most vocal of the dissident union members took this latest move as a direct attempt to silence them and end their influence on union affairs. Accordingly, they refused to sign the agreements, and their BBS access was suspended. The suspended members protested these actions within the union, but the feedback from union management, mostly the very people cutting off their privileges in the first place, was not encouraging. Union management did revise the agreement somewhat to create a paper recognition that union members have a right to speak out within their own union, but on a practical level it continued seeking total control of discussion on the BBS.

Not to be put off, the dissident members went straight into federal court in Los Angeles, seeking reinstatement of full access to the WGAW BBS and a judicial declaration that the BBS user agreement being

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A screenshot of a computer screen displaying the USA Today masthead and a menu. The masthead at the top reads 'USA TODAY' in large letters, with 'Copyright, Friday, November 28, 1997' and '25¢'. Below the masthead is a menu with the following options: 'Advertisement', 'Booking & Advertising', 'Business News', 'Books', 'Health', 'Home', 'International News', 'Magazines', 'Personal Investing', 'Real Estate', 'Sports', 'Technology', 'Telecommunications', 'Travel', 'Trends & Marketing', 'Home & Design', and 'Weather'. To the right of the menu is a large, stylized 'USA' logo with 'TODAY' underneath it. At the bottom of the screen, there is a horizontal bar with the text 'Hit F2 for Help | AYS1600 | 30900.MSI.FDX |' and 'Online 601' on the right side.



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pushed on members by the union leaders was invalid. Such legal action may seem a bit odd to those of us who are accustomed to viewing BBSs as being primarily under the sysops' control. If a sysop does not like the name "Jim", then he should have every right in the world to keep all people named Jim off the BBS. If a sysop wants to dictate that callers to his BBS will only talk about apple pie a la mode, then even postings on such closely related topics as peach cobbler or cherry pie will get the axe, and no one can complain they were treated illegally.

But it turns out that a union member's rights within his union are somewhat like the rights of a U.S. citizen under the federal government. We all have First Amendment rights to speak freely, with no government interference. Similarly, union members have the solemn right to speak openly within their union, to roundly criticize leadership if that is their wish, and the union leaders legally can do nothing about it. This, then, was the basis for the dissident members' claims against the union: the BBS operated as an open forum for the discussion of union issues, and the union's leaders had no legal power to limit access to the BBS or censor messages. By doing so, they denied the free speech rights of union members, and violated the law.

As often happens in court, there was some pretty intense procedural jockeying between the parties. First, Walton and the other defendants managed to delay the judge in his consideration of the union members' demand to immediately restore their access to the union BBS. When they could delay no longer, the defendants completely shut down all public discussion forums on the union's BBS, leaving only private e-mail and file transfer functions. Based on their own shutdown, they then argued to the judge that since public BBS forums no longer existed, it would be meaningless to mandate access for the union members who started the lawsuit. As lawyers say, the point became moot.

The judge went for the defendants' ploy, holding "the plaintiffs have no protected statutory right to open BBS public forums, managed and financed by the Guild." He stated

that the union laws relied upon by the dissidents were not meant to force unions to maintain effective communications channels for their members, but to prevent unions from keeping their members from meeting outside official union forums. In a footnote, the judge mentioned that dissenting union members were in the process of setting up their own BBS.

In that incidental reference lay the union members' greatest opportunity of all. About a month ago as of the date this is written, WGAW members not willing to see their public BBS forums go down in the flames of union warfare set up a new BBS entirely outside official WGAW purview. The new BBS, called Page, is open to all WGAW members as well as all other professional writers (those who believe they qualify can call Page at **(310)273-7326**, - 7243, - 7395, -7399 or -7419). Strangely enough, Page is supported not only by the dissident union members, but also by many of the union leaders. It seems friend and foe alike at WGAW missed the social world of their BBS. At two weeks of age, Page was already nearly as popular as its predecessor five-year-old WGAW BBS, with five lines up and more imminently planned.

Haines and other union protestors plan on appealing the judge's ruling against them, but from here that just looks like mop-up work. The battle's already been won by the members of the WGAW union. They discovered computer communication, and the balance of power at WGAW has been forever changed.

[Lance Rose is an attorney practicing high-tech and information law in Montclair, NJ. He can be found on the Internet at ***elrose@well.sf.ca.us***, and on Compuserve at 72230,2044. He is also author of *SysLaw*, the legal guide for online service providers, available from PC Information Group at **800-321-8285**. -Editor]

DIRECT DIAL

HOT WIRE YOUR FAMILY TREE GENEALOGY ON-LINE

by Jay Hall

Genealogy is one of the most popular hobbies in the United States, or for that matter, the world. Literally millions of devotees spend hours each week looking for their elusive ancestors. While these seemingly normal-looking people are often seen roaming cemeteries, rifling library shelves, and sleeping in microfilm readers, a growing number of them are beaming into cyberspace. It is a common sight at genealogical conventions to see sixty and seventy year-olds swapping stories about comm software, e-mail addresses, and remote databases.

You'd almost think it was some kind of "gray power" revolution! What are these people doing playing with laptops instead of planting petunias?

Frankly, although I've been a professional genealogist for almost twenty years, it's a little hard to explain. Genealogists range in age from the very young (ten or less), through young mothers and successful executives, to the most common group; grandparents. Some do it because they want to pass on something to their posterity. Some do it because they have a personal interest in history. Relatively few do it to find glory and lost inheritances. Can you explain why you get excited about what you find interesting?

Of course, for readers of Boardwatch, the question is, "What are these people doing in the ether, and what are they finding here that I'm missing?"

Like a lot of things available via modem, what they are finding is probably information that can be found elsewhere, they are just finding it faster.

First, a little background on genealogy and research. If you want to know about your ancestors, the first place you would look was to your own family. Ask your relatives, look in the family Bible. Or you could go to the village priest and have him let you look at the church registers of births, marriages

and deaths. Ask someone who knows, or look it up in a book.

As more people became interested in genealogy, they formed societies ("support groups" in '90s newspeak), shared information, and offered to help each other with their research. When societies got bigger, they started their own libraries with published books, and transcriptions of records they thought would help other genealogists.

According to Everton's Genealogical Helper, there are now thousands of local, state and national genealogical societies in virtually every country. Almost every one of these societies publishes a magazine or newsletter. Almost all of them have some kind of a library. And every month hundreds of books on genealogy are published in the United States alone.

Obviously, there is no lack of people to ask, or books to look in. So why bother with computers and modems?

Because you can ask more people, and do it faster. And you can look in more "books," and do it faster.

Virtually every community has local bulletin boards, almost all of which carry a variety of discussion conferences, networked to other bulletin boards. Named "genealogy," "ancestry," "roots," etc., discussion groups on family history can be found on at least a half dozen echo conferences, as well as on the Internet and the major national services (Genie, CompuServe, Prodigy, etc.). These forums are used to trade family data, ask for information on specific surnames, provide information on local libraries and archives, or give background detail on a variety of subjects.

In the week before writing this article I saw information ranging from the political and religious history of Finland to weather reports from eighteenth century Virginia to occupations in nineteenth century America. If you need it, just ask.

Of course, you still have to wade through the daily traffic to get to your response. Some national genealogy conferences run over 100K of traffic daily. In the effort to make it easier, some discussion groups have split into separate groups for surnames and software. Genie has taken it even further, with almost a thousand different areas in its genealogy bulletin board

for specific surnames, surname groups, research in specific states and countries, software support, calendars of genealogical events, religious groups, technological advances, and specific record types.

And then there are the local bulletin boards devoted to genealogy and family history. Like the population of bulletin boards in general, the number of these boards varies from one day to the next, but several of them have become nationally known as resources for those seeking their roots. Typically these boards offer network conference areas, local conferences, and file areas featuring genealogical software. Some even offer searchable databases.

Ah, databases. The holy grail of the researcher. The impossible dream. Tap on a few keys and presto! Instant ancestry.

Get real.

Current estimates put the earth's population at about 5.5 billion. Assuming that to be about half of the total historical population of the world, there have been 10 to 12 billion people on this globe. Just finding out their names would be a project bigger than building the pyramids or fighting World War II. And then the relationships would have to be worked out and linked up in a database. A lot of people have been working on it, but it ain't happened yet.

OK, so maybe you've heard of the Family History Library in Salt Lake City. True, they have a collection of almost 2 million rolls of microfilm, and about 500,000 bound volumes. And they have computer databases with almost 200 million names in them. But these are NOT available via modem. You can use the computer databases (on CD) or view the microfilm at over 1,500 branches of this library (called Family History Centers), but you can NOT reach out and touch it with your 2400 baud bit vacuum.

Even so, there are surname databases that you can access. Everton Publishers maintains several databases on their On-line Search bulletin board, with over two million names as of the time this article was written. The soc.roots/ROOTS-L people maintain several databases that can be searched on the internet via listserver at vm1.nodak.edu. And databases of census schedules to parish registers

Resources:

(1) Accessing Library Catalogs via Telnet (This is not a complete list!)

CARL (Colorado)
Telnet pac.car.org (192.54.81.128) or direct dial (303)758-1551

LC Marvel (Library of Congress)
Telnet marvel.loc.gov port 70 (140.147.2.15)

LOCIS (Library of Congress) Telnet locis.loc.gov (140.147.254.3)

Melvyl (California) Telnet melvyl.ucop.edu (192.35.222.222)

ERIC (New York) Telnet acsnet.syr.edu (128.130.1.21)

Note: These and many other catalogs are also available through many campus gopher systems. If you are using a campus gopher, choose "Other Gophers", then follow the locality listings (e.g., "Colorado"), then choose the library catalog you want to search (e.g., "CARL").

(2) Internetwork Mail Guide

The Internetwork Mail Guide tells how an e-mail message can be sent from one network (such as the Internet) to another (such as CompuServe. To get the latest release, send a message to LISTSERV@UNMVM.BITNET, no subject line, and the words GET NETWORK GUIDE in the body of the text.

The Guide is also posted periodically to these Usenet newsgroups: comp.mail.misc, alt.bbs.lists, and alt.internet.services.

(3) Some Selected Genealogical Bulletin Boards (This is not a complete list!)

National Genealogical Society
(703)528-2612

Everton's On-line Search
(801)752-6095

Family Search Support
(801)240-3909

S U Genealogists
(504)277-0882

Pioneers
(206)755-7983

The Skeleton Closet
(804)671-8547

(4) Some Networks with Genealogical Conferences (This is not a complete list!)

Fidonet (genealogy)
UtahNET (ancestry)
PC-Relay (genealogy, roots)
Intelec (genealogy)
U'NINet (genealogy)
Usenet (soc.roots)

(5) Family History Library/Family History Centers

Family History Library
35 North West Temple Street
Salt Lake City, UT 84150

Write for a list of Family History Centers in your area.

are available from as far away as Britain and Norway.

Even information that is not computerized can be discovered by modem. Locally, many library systems are operating dial-in catalogs that can be searched by subject, author, or title, and which will give you the current status of any copy. On a larger scale, Melvyl (in California) and CARL (in Colorado) provide internet users with access to a large number of university and college library catalogs. Access to the catalog of recent acquisitions by the Library of Congress can also be gained via internet, either through connection to dra.com, or to the more complete search facilities offered by LOCIS. Melvyl, CARL, dra.com, and LOCIS are all available via gopher.

Once you find a book in one of these catalogs, you can take the information to your local public library, where they can usually help you arrange an interlibrary loan of the book you want.

All this, and we haven't even mentioned e-mail yet. From before Ben Franklin, if you wanted to find something out about your family, you could send a letter to a relative or an antiquarian to ask for advice. Literally millions of people, and a growing number of genealogical companies, are hooked up electronically via a bewildering array of e-mail outfits. Among these are the major services (Compuserve, Genie, Prodigy), long distance telcos (MCI Mail, AT&T Mail, Sprintmail), and government or non-profit networks (NASAmail, PeaceNet). Even local BBSs can get into the e-mail act through services such as Fidonet. Most of these interact with the internet, allowing people on one network (say, an e-mail box with MCI) to connect with someone on an entirely different net (such as the Colorado Supernet).

With the growing number of people using bulletin boards and other services, and the growing number of connections between networks, it is becoming easier, cheaper, and faster to send an electronic message to almost anyplace you can send regular (snail) mail.

Like everything else concerning genealogy and computers, modems, networks, and databases are revolutionizing the way people climb their family trees.

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- Multiple Doors for Satellite Databases

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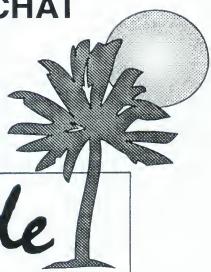
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BOARDWATCH 100 READERS' CHOICE BBS CONTEST RESULTS

The Boardwatch 100 Readers' Choice BBS Contest closed at the stroke of midnight terminating the last day of June, 1993 after a six month run. A total of **20,200** BBS callers submitted ballots for some **1775** bulletin boards in this simple popularity contest. A number of BBS operators ran a variety of creative promotions to induce their callers to submit ballots on their behalf. This served as a point of endless irritation to those operators less inclined to do so and we received numerous complaints that some systems were trying to "buy" the contest. We found this more than a little charming as one of the purposes of holding such a contest is to "promote" bulletin boards and induce BBS operators to do so as well. We're quite pleased they did.

One question that comes up quite often regards the gender mix of the online community. There seems to be a lot of sentiment that somehow it should "represent" the society at large. It doesn't we have to guess. Of the 20,200 ballots received, **17,943** claimed to be male, and **2257** female indicating an **88.26%** male majority and some **11.74%** femmes. This is actually MORE one sided than last year's contest where some **14%** of the ballots received were from the gentler gender.

The other question that comes up quite a bit regards age. This was a bit interesting for me personally. Two years ago, in an editorial, I noted somewhat tongue in cheek that I thought ALL BBS operators were just exactly 36 years old. For months we received letters and e-mail from those who were indeed 36. I have aged two years since then of course



and turned 38 last week. But interestingly, the online community hasn't. The average age of our 20,200 voters was exactly **36.01** years. A bit more widespread examination shows the following distribution.

Notably, nearly 900 votes were from those over 60 and over 200 votes were cast by callers OVER the age of 70. The largest age group of course was the **30-39** group at **29.27%** and **74.59%** of the population was age **20-49**.

Callers averaged 62 calls to bulletin boards per month which we found surprisingly active. This is indeed an addictive sport. They also claimed an average **55.68** months online

which we also found extraordinary. In fact, even the 10 years and under age group claimed an average of **33** months online, so for some, BBS activity appears to begin shortly after their exit from the womb.

We asked our voters to indicate whether or not they had installed a second telephone line for data use. Some **6634** or **32.84%** had done so, while the majority, **13325** or **65.96%** still used their voice line. A surprising total of **241** or **1.19%** did not know what a telephone was.

We also took a look at long distance usage. Actually this was not a question asked. We simply examined the area codes callers gave for their voice

Terminal Software

Procomm	6392	31.64%
Telix	4645	22.99%
Qmodem	2786	13.79%
Telemate	878	4.34%
Crosstalk	519	2.57%
Quick Link	408	2.02%
Z-Term	315	1.56%
First Class	266	1.32%
MTEZ	258	1.28%
BitCom	213	1.05%

Breakdown of Voters by Age Group and Sex

AGE GROUP	TOTAL	PERCENT	MALE	FEMALE
Under 10	32	0.16%	24	8
10 to 19	1976	9.78%	1781	195
20 to 29	4334	21.45%	3802	532
30 to 39	5913	29.27%	5216	697
40 to 49	4823	23.87%	4326	497
50 to 59	1770	8.76%	1614	156
60 to 69	678	3.36%	613	65
70 and over	218	1.08%	187	31

numbers and the area code of their favorite BBS. Again, a very surprising **7092** or **35.11%** voted for their FAVORITE BBS in a different area code - certain to be a long distance call. We had no way of detecting long distance dialing within the same area code, but clearly way over a third of BBSing is NOT a local sport.

As the contest began, we were also curious how well Windows was catching on in the online community. And the votes did demonstrate this with some precision. Some **11,629** of our voters professed they do use Microsoft Windows - constituting **57.57%** of the population - slightly over half. Some of the nays did however include some pretty colorful comments regarding Windows, it's heritage, Bill Gates, his ancestry, and generally what we could do with Windows.

Another thing we've followed over the last year or so more or less successfully is the type of terminal software people use. Unfortunately, these statistics were rendered a bit askew by one of the most interesting ploys of the contest. In our early returns on the contest which we published month by month, it was quite difficult to tell Telix and Qmodem apart - they were pretty much a dead heat for second place behind Procomm Plus with Telix edging ahead at times and Qmodem at others - statistically a dead heat. Jeff Woods, the head of deltaComm development and the new owner of the Telix program, mounted a serious campaign of getting out the vote for

his product support BBS in the Boardwatch 100 Readers' Choice contest. By offering a number of incentives and mailing out thousands of ballot forms, he was successful enough to rank 3rd in the contest - even though a large number of voters voted for some OTHER BBS on the ballot form deltaComm provided. This is very unusual for a product support BBS, and we were intrigued as to why a purely product support BBS would even WANT to win a BBS popularity contest - much less go to this expense. The reason was pretty clear. They didn't care whether you voted for their BBS or not, they wanted Telix users to vote, and thereby appear statistically to be the clear choice over Qmodem. While

BBS Software

PCBoard	26
TBBS	22
Wildcat!	14
MajorBBS	12
Remote Access	5
DLX	3
First Class	2

from callers who just didn't know what brand of modem they were using.

At the top of the heap, Hayes and U.S. Robotics were almost too close to call with Hayes leading at **2194** callers and U.S. Robotics at **2075** - each representing a little over **10%** of the BBS population. Zoom Telephonics trailed slightly at **1697** or **8.40%** of the total. Another battle for fourth place between Practical Peripherals at **1087** and Supra at **1082** is again statistically nearly insignificant in difference at just over **5%** of the total. These rankings and percentages are virtually identical to last years contest. The big winners this year seem to be Boca - not even listed as statistically significant last year and capturing over **3%** of the market this year, Intel, moving from **1.42%** last year to **2.44%** this year, and ZyXEL, moving from **.38%** last year to **1.32%** this year.

Modem Speed Breakdown

Speed	Total	Percent
19200	596	2.95%
14400	6400	31.68%
9600	2504	12.39%
2400	10177	50.38%
1200	511	2.53%
300	12	0.06%

this invalidates the veracity of our statistical analysis of terminal software, at least with regard to the second/third position, we continue to be utterly in awe of the ingenuity of the American entrepreneur and the power of the free enterprise system. Is this cunning or what? America - WHAT A COUNTRY!

A total of **149** communication programs were represented. Last year **296** different terminal programs were listed indicating at least some consolidation in the terminal software program market.

We think the modem usage statistics are a bit more accurate. The modem manufacturers listed below comprise all those with greater than a **1%** share of the total. Some **206** distinct brands of modems were represented in the contest. Again the market seems to be consolidating down from **379** brands available in last years contest. While we tend to follow a few brands in Boardwatch, it is always surprising to contemplate just how many players there are in this market. And we still had **3393** ballots

Modem Market Share

Hayes	2194	10.86%
U.S. Robotics	2075	10.27%
Zoom	1697	8.40%
Practical Peripherals	1087	5.38%
Supra	1082	5.36%
Boca	638	3.16%
Cardinal	527	2.61%
Computer Peripherals	502	2.48%
Intel	494	2.44%
Best Data	461	2.28%
Packard Bell	424	2.10%
Gateway	380	1.88%
ZyXEL	267	1.32%
Infotel	257	1.27%
Twincomm	244	1.21%
GVC	219	1.08%
Everex	214	1.06%

In this issue, we do present the final list of 100 BBSs garnering the most votes. This year, to avoid the inevitable ties, we date stamped all received ballots and numerically scaled vote values by date with votes entered on the first day of the contest receiving a score of 180 and the point

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HoloDNS is an option you can have with HoloUUCP. HoloDNS provides a custom Internet address for your BBS. For example, your members would have an address like "first.last@your-BBS.com". The one time setup fee for HoloDNS is \$25.00.

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value of a ballot decreasing by one point for each day into the contest. This numerical weighting is only used to break ties between systems that have an identical number of votes, under the arbitrary and somewhat dubious theory that earlier votes are somehow better.

The BBS software used by a BBS does influence the final form and presentation of the BBS to the caller and so is a factor. But we had participation from a widely differing sets of TYPES of BBS, with general bulletin boards, chat bulletin boards, product support bulletin boards, etc. representing many different "ponds" of online activity. This makes an analysis of what BBS software is used, interesting, but not very indicative of anything. Nonetheless, PCBoard, TBBS, Wildcat!, and MajorBBS were quite predictably the four top favorites.

As to the winners, the top 100 probably represents a much better cross section of the BBS world than did last year's. The top system received **1330** votes, but only **32** votes were required to make the list. Of the top 100 bulletin boards, the average line count was **25.41**, skewed strongly by Exec-PC's 280 lines and Canada Remote Systems' 200 lines. But while the serious bulletin boards are clearly going to ever higher line counts, you don't have to have hundreds of lines to make a showing among callers. A single line system, Eagle's Nest right here in Denver showed strongly at number 20, and a four line system, Totem Pole, scored to number 13. Actually, there were TWO single line systems in the top 100.

Adult and chat systems again dominated the list as a whole. Our theory is that the elements of community that make promotion in a contest of this sort are much more easily found on these social interaction boards than on file systems. But in the top 10, file systems actually seemed to be the winners, so the advantage is certainly not insurmountable. In fact the diversity is pretty encouraging. But the top four systems were all file systems and two of the top 10 were totally free of charge and devoted to technical topics, shareware, and files. Three of the top 10 were clearly adult in nature.

We did find it odd that four of the top 10 systems used totally custom devel-

oped software for their services, and an additional system used a product titled SHS that we had never before encountered.

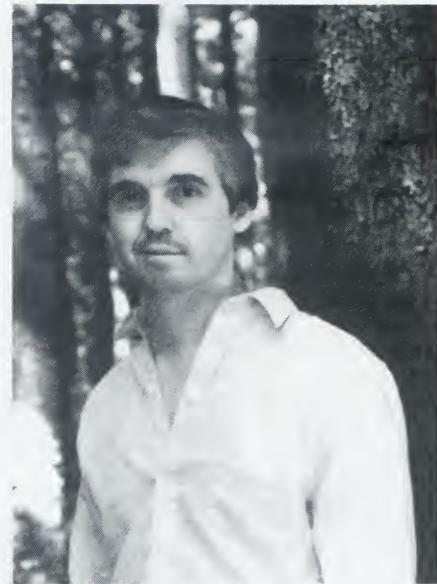
FIRST PLACE - SOFTWARE CREATIONS - (508)368-7139

The top BBS in the Boardwatch 100 Readers' Choice Contest was Dan Linton's Software Creations BBS in Clinton Massachusetts. This system received **1330** votes. The system started in December 1989 with one telephone line on a DTK XT, a 2400 bps modem, and a 20 MB hard drive. By the following October, the system was up to 4 lines, using U.S. Robotics HST Dual Standard modems, a 386 MB hard drive, and a LANtastic network to tie the computers together under PCBoard BBS software. With Linton's background in hardware design, the system largely served as a technical information center for other local BBS operators.

In March, 1991, Linton released his first shareware program, titled Picture Puzzle. The popularity of the system increased as it became known as the home system of Picture Puzzle. Linton entered into a relationship with Apogee Software to serve as their support BBS and point of release for their popular series of shareware game programs, including Commander Keene, Wolfenstein, and others. These programs have changed the perception of shareware game software by providing graphics, sound, and strategy on par or superior to commercial game software. Other BBS operators and callers from around the country to get the latest versions of this popular series for their systems and Software Creations blossomed.

Today, Software Creations runs PCBOARD Version 15.0, Novell 3.11 local area network, and services 83 incoming lines on 66 80386 40 MHz nodes, two 80486 33 MHz file servers, and a maintenance machine. They currently claim some 2000 callers per day to access the 8 gigabytes of files.

The mission of the Software Creations BBS remains as a file board dedicated to the development and distribution of shareware software. They've become the



Dan Linton of Software Creations

support/distribution system for other shareware software companies including Id Software, Gamer's Edge, Epic MegaGames, Boxer Software, ImagiSOFT, HomeBrew Software, and many others. They've also developed a bit of a following among those developing graphics screens, sound files, and other expressive elements in the programming world. Dan Linton, Software Creations, 26 Harris Street, Clinton, MA 01510; (508)368-8654 voice; (508)368-7139 BBS.

SECOND PLACE - EXEC-PC (414)789-4210

EXEC-PC, one of the nation's largest and oldest bulletin boards, placed second in the Boardwatch 100 Readers' Choice BBS Contest with **1288** votes. Exec-PC was established in 1983 as the first large BBS. As such, it is one of the longest running systems in the industry, and has recently grown to 280 telephone lines.

Guided by 10 years of interaction with the users, the custom software designed by sysop Bob Mahoney is feature rich, and the operators are able to quickly implement both serious, and even sometimes whimsical user suggestions. They currently claim to receive a staggering one million calls every seven months and



Bob and Tracey Mahoney of EXEC-PC

have become known for their "millionth" caller milestone contest giveaways that were at one point almost annual but seem to happen with increasing frequency.

Exec-PC is a primary distribution point for much of the shareware available today, and many bulletin boards get much of their new files from Exec-PC. Exec-PC actively welcomes sysops from all over the world and takes pride in the fact that many stock their collections from Exec-PC's supply. This creates a distribution system whereby a shareware author can upload a new file and have it distributed virtually worldwide within hours. The system receives over 5000 calls daily with some 200 new files uploaded by callers each day. Additionally, the system sports some 30 CD-ROM drives for a total of over 650,000 files available online with a file search program unique in the industry for its speed, interface, and the ability to search through more than 15 gigabytes of files with a single command.

Although Exec-PC was rather militantly a "files board" for a number of years, they have more recently added a pretty serious series of message areas currently sporting over a

half-million messages and it does accommodate .QWK offline mail readers. Additionally, they have added publication features such as PC-Catalog, an online catalog listing personal computer equipment, Espan Job Search, and we were most pleased to note, Boardwatch Online Edition. They also have a game titled Global War that has become quite popular and currently have 50 of these interactive games in operation.

Exec-PC claims to be one of the "most generous bulletin boards in the world." Subscriptions to the service are **\$75** per year or **\$25** per quarter and they allow ten hours of access and 7 megabytes of downloads per week for this subscription fee. This is quite flexible for the caller as they can use the entire allocation in a single day, or as they wish during the week. The system also sports X.25 connections via the CompuServe network and the Global Access X.25 network. The system is run by Bob and Tracey Mahoney. They've recently added staff to help run the system including Greg Ryan, author of RyBBS. Exec-PC, PO Box 57, Elm Grove, WI 53122; (414)789-4200 voice; (414)789-4210 BBS.

THIRD PLACE - DELTACOMM BBS - (919)481-9399

deltaComm Development, Inc., is headed by Jeff Woods and currently markets the communications program Telix. They operate a 10-line BBS in Cary, North Carolina using PCBoard version 15.0 and are our third place system with **973** ballots. The system does provide online product support for Telix users, but according to Jeff Woods, they also want to expand the BBS into a full-fledged online service. "We feel this system is unique in the mid-south," says Woods, "offering high quality, high volume services at little or no cost. We're very excited about its future." He went on to state that the two businesses, communications software, and the services that software is used to contact, go hand in hand. We couldn't agree more.

The system offers 4 gigabytes of online files and carries all conferences on the RIME network and 99% of the FidoNet backbone (1:151/107). They plan to add Internet mail this month. The system runs on an unusual Cubix Corp box containing ten 486 PC slave cards under Novell 3.11. As a result, it does have 10 PCs built into a single case to serve 10 lines. Staffer Zack Jones actually sysops the system. Jeffrey L. Woods, President, deltaComm Development, Inc., PO Box 1185, Cary, NC 27512; (919)460-4556 voice; (919)460-4531 fax; (919)481-9399 BBS.

FOURTH PLACE - PC-OHIO (216)381-3320

Scoring in the fourth position in the Boardwatch 100 Readers' Choice BBS Contest is Norm Henke's PC-OHIO BBS with **664** votes. Norm started PC-OHIO on 9/1/85 with one telephone line on a used TAVA XT clone in his bedroom. He began with RBBS but switched to PCBoard within a few months. In 1986 he expanded to three nodes and then to five nodes. It has grown to 40 486 computers in the basement all linked together thru an Ethernet network.

In 1991 Norm decided that since the BBS had grown so large he needed to work full-time at home on the BBS. He is now a "professional" Sysop spending as much as 12 hours a day



Norm Henke of PC-OHIO

working on the system. The work load has grown large enough that now his wife, Joyce, has quit her job as a Registered Nurse and is helping Norm full-time as an employee of PC-OHIO. PC-OHIO also recently incorporating as PC-OHIO, Inc.

Norm bought a larger house this summer in neighboring Lyndhurst which has a large carriage house on the property. They will be moving in the fall into these larger facilities and expand PC-OHIO to 50 nodes. They will also be adding a T1 connection to the Internet to provide high-speed full Internet access.

He has been the Fidonet Region Echomail Coordinator (REC) for Region 11 (the Midwest) and Net Echomail Coordinator (NEC) for Net 157 (Cleveland).

A resident of South Euclid, Ohio, Norm is 39 years old and has been married to his wife Joyce for 17 years. They have a four year old son, Colin, and a one and a half year old son named Ian. Norm's major non-computing interest is science fiction. He has a collection of 3,000 paperback books. He is a big fan of Doctor Who and Star Trek.

A founding member of the Greater

Cleveland PC Users Group and a former president, he is currently an advisor to the club board of directors.

PC-OHIO is connected to 22 email networks including the Internet as pcohio.com. PC-OHIO has over 100,000 ZIP files. It contains over 15 gigabytes of actual files. They use US Robotics HST Dual Standard 16800 bps modems on all phone lines.

PC-OHIO has over 5,000 subscribers plus 300 visiting Sysops and about 1000 visitors who have limited privileges. It has contracts with two local user groups to provide BBS services to their members. Norm Henke, PC-OHIO, 23749 Cedar Road, Cleveland, OH 44122; **(216)291-3307** voice; **(216)381-3320** BBS.

FIFTH PLACE - GLIB - (703)578-4542.

Scoring fifth in the Boardwatch 100 Readers' Choice contest with 411 ballots is GLIB run by Jon Larimore out of Arlington, Virginia using TBBS software.

GLIB, The Gay and Lesbian Information Bureau, is a 501(c)(3) non-profit information and commu-

nications resource primarily (but not exclusively) serving the Lesbian, Gay, and Bisexual community, as well as other non-profit organizations within it. GLIB is located in the Washington DC area.

GLIB offers free memberships to any adult 18 years of age or older who can show financial support of or membership in any non-profit community organization, or who alternately wishes to make a contribution to CESF (Community Educational Services Foundation), the "parent corporation" which sponsors GLIB. Everyone associated with GLIB is a volunteer. CESF/GLIB has no paid staff.

GLIB is a sophisticated system with more than 1000 active members. While most of its members are Gay, Lesbian, or Bisexual, many are not. GLIB has a significant number of straight members, and warmly welcomes folks of all sexual orientations.

A large percentage of GLIB members live in the Washington DC area, but the GLIB membership roster also includes many from as distant as Florida, Texas, California, Connecticut, Canada, Puerto Rico, and France.

For both visitors and members, the direct-dial modem number for GLIB is: **703-578-GLIB** (578-4542).

GLIB offers totally free Internet e-mail service to all its members, and each can be individually reached via this growing international network.

Free public and private "store and forward" communications via GayCom, the international cooperative network of some 30 Gay BBS services in major US cities, Canada, and Europe is available to all GLIB members as well.

GLIB also offers thousands of information files in Special Interest Groups (SIGS) about health, social services, personal enrichment, humor, cuisine, computers, entertainment, the arts, travel, politics, local and national news, weather, religion, and other special sections.

GLIB features a resident on-line physician - "Ask The Doc" - who answers personal questions and

offers general medical advice, as well as a professional psychological counsellor -"Dear GLIBBY". We also feature extensive Macintosh and IBM computer SIGS, offering thousands of "try before you buy" Shareware programs.

GLIB/CESF is a supporting member of ASP - The Association of Shareware Professionals, as well as a corporate sponsor of the Electronic Frontier Foundation and an active supporter of Brother Help Thyself. CESF also sponsors an ancillary community support service called the Upper Westsider Memorial, which provides grants of computers to other community support organizations.

GLIB also offers a separate section for women - Lesbians On Line - complete with community resource files and information sections of particular interest to women.

Other GLIB SIGS include those as diverse as "Quiet Pride" for deaf GLIB members, "Leathermen" for men of the leather/Levi community, "disABLEd", serving GLIB members living with physical challenges, and "Gowns 'n Crowns" providing support and information for transsexuals, female illusionists, and transvestites.

Current publications on GLIB include USA Today, US Weather Service reports, Boardwatch Magazine, Hi-Tech Home Weekly, Thinking Magazine, Business Sense, EFFector Online, and several health/AIDS newsletters.

GLIB is a Washington-area Information Provider for CAIN - The Computerized AIDS Information Network.

Real-time live computer-based "chat" conferences are popular on GLIB, often with 15 to 20 callers in one conference. Private one-to-one live conferences are also popular, as are our "Hello All" and "MugShotz" sections for personal profiles and digitized GIF photographs of our members.

In the GLIB "Leisure Lounge", you'll find sophisticated on-line competitive games including Blackjack, StarQuest, BandWarz, Legends, Hangman, Roulette, BBS King, Lexi,

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SIXTH PLACE - WESTSIDE - (213)933-4050

Scoring sixth in the contest with **407** votes is WESTSIDE, a popular west coast social chat system. Dave Harrison started Westside in Los Angeles in April, 1987 as a 2-line DLX board. Westside quickly grew and within the year moved to 16 lines in an office on Wilshire Boulevard, serving as a popular social chat service.

In August, 1991, the system changed to a proprietary software platform titled Metropolis - the Online City, written in C by Walt Howard and running on the QNX operating system. The software was expandable to 250 lines allowing Westside to grow to their current size of 132 lines serving some 7200 users. The system sports a Sprintnet X.25 connection giving local access in over 800 cities at **\$9.95** for the first five hours and **\$2.10** per hour for additional hours of access between 6 PM and 7 AM. The plan expansion to some 200 lines by the end of the year.

Jon Larimore of GLIB - Gay & Lesbian Information Bureau

Yahtzee, and many more, in which GLIB members compete for monthly scoreboard ratings.

GLIB is totally menu-based and carefully designed for ease of use. But an interactive hypertext-based on-line tutorial, as well as a keyword-searchable "Where Is It?" utility and complete Operations Manual are available on GLIB for new users (and old-timers too) for help with using our many unique features.

Should you wish to remain anonymous on GLIB, you may choose a "handle" (pseudonym) by which other GLIB members will know you. All GLIB membership records are absolutely confidential, and are never divulged to anyone for any reason.

To join GLIB, just sign on using any name or handle you care to (providing it's not already in use by another GLIB member). In the GLIB Visitors Reception Room, you'll find complete information about GLIB, as well as a membership application form you can download and print out for yourself. That application form is absolutely required for membership. GLIB does not accept voice valida-

tion.

GLIB can also immediately fax GLIB membership information to you, as well as accept it by return fax for fast validation. To receive membership information via the GLIB "Fax On Demand" service, calling the CESF voice mail system at: **703-379-4568**. There, you'll be offered an opportunity to request immediate automatic transmission of GLIB membership information direct to your fax number.

GLIB can be economically reached at a local phone number from thousands of cities and towns in the US via PC Pursuit, the commercial discount long-distance personal data network operated by US Sprint. For more information about PC Pursuit, use your modem to call their information BBS at: **1-800-877-2006**. Their national voice number is: **1-800-736-1130**. (GLIB is not associated with US Sprint nor with PC Pursuit, but is one of many BBS services available via their outdial modem network). GLIB, PO Box 636, Arlington, VA 22216; (703)379-4568 voice; **(703)578-4542** BBS.

In addition to the expected chat function, the system also sports a file area with some 25,000 .GIF images, 20,000 IBM and Windows shareware files, and other files totaling 10 GB - none of it CD ROM. They also carry publications such as Boardwatch, EEEEEK BITS, Hi Tech Home Weekly, The Underground Informer, Carl Paul Daily Horoscopes, Frugal Gourmet, and many more. They are in the process of adding a service titled Sportscreen providing national sports scores updated every 15 minutes.

Online games are also provided with such titles as Outburst, Trivia, and a highly addictive stock portfolio trading game titled Portfolio. The system also claims that some 40 couples have met and wed on the service, and they've received some 3.3 million calls since opening in 1987. Westside, PO Box 36846, Los Angeles, CA 90036; **(213)857-5800** voice; **(213)931-3681** fax; **(213)933-4050** data.

**SEVENTH PLACE -
ALBUQUERQUE ROS -
(505)299-5974**

Scoring seventh in the Readers' Choice Contest with **378** ballots, the Albuquerque ROS is a unique bulletin board system in many respects. The Sysop, Steve Fox, is also the author of the BBS software, ROS, which gives FOX the flexibility and responsiveness that have made The Albuquerque ROS one of the top boards in the country - without offering ANY "adult" material. One local newspaper columnist says the Albuquerque ROS has a "grown up" approach to doing things. Fox simply says his orientation is technical and that the user base has shown time and again that "adult" materials (pictures, messages, chat, etc.) are not necessary. Users like the fact that their children are welcome to call and not be barraged by references to sexually explicit material.

Running on a a 486DX33 Novell 3.11 file server, Fox uses Cubix multi-CPU cards to provide a 14 line system with minimum interaction between nodes. WIth 60,000 files on-line, the Albuquerque ROS is generally considered a files board. But with 4000 users, there is a very active social life with multiuser games and message areas. A recent addition to these forums is the HOT area for "Hot topics and a little hot air." User opinions on a wide variety of topics have proven that while computer people may share a common interest, they are also widely divergent in their thinking. Topics discussed have ranged from AIDS to Rush Limbaugh and from personal freedom to the environment. While the give and take sometimes gets heated, intelligent argument always wins over name calling and finger pointing.

The Albuquerque ROS is New Mexico's longest continually operating BBS, online since the state got electricity in 1984. While subscriptions (**\$30** per year) are encouraged to increase users daily time allowances and access to services, the Albuquerque ROS has always been a free system. The system provides 14 lines using Supra V.32bis 14,400 bps FAXmodems. Steven Fox, Albuquerque ROS, 2112 White Cloud NE, Albuquerque, NM 87112; **(505)299-5973** voice; **(505)299-5974** BBS.

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EIGHTH PLACE - ODYSSEY (818)358-6968

In eighth place with **369** ballots is Odyssey Online. Called "the largest adult-based entertainment service in North America, and quite possibly the world" but the ever-modest and self effacing General Manager Michael Allen, Odyssey Online line is touted as the high-energy online spot "where adults come to play." Allen heads a team of five full-time employees and numerous contractors that run what PC Computing Magazine terms a "Super BBS" grossing over **\$1,500,000** annually. Odyssey has been seen on NBC's "A Closer Look", "Donohue", Time Magazine, and a number of computer-related publications.

The service started in 1988 on a single line, and went through several name changes and line configurations before becoming Odyssey and reaching it's current 118 line capacity. The company has plans to

expand to some 300 lines in the future. Odyssey is available via local numbers covering over 850 cities in the U.S., Canada, and throughout the world.

Odyssey's theme is "adult entertainment," a term that carries a stigma of hardcore porn that some publications and online services have refused Odyssey advertising that contains the word "adult" or "mature." What "adult" mainly means to Odyssey subscribers, however is "no kids", a simple concept to most adults.

"Odyssey's real success is an alternative to the neighborhood bar or club", states Allen, "where people relax and unwind after a hard day. We're selling people mixing with people," Allen continues, "all we're doing is giving them a place - the Odyssey Platform - to do it." Odyssey's typical user is a 32 year-old male or female professional with upper-middle income.

According to Allen, "Our market is adults with adults. It's that simple. If you're looking for the latest esoteric software patch, you're probably not going to find it with us. But if you're looking for a place to express your ideas in public or private, gaming with the best players in the country, chatting through the night with new friends, or downloading the hottest image files in the U.S., then the one place you should be is on Odyssey."

The adult image libraries claim to be one of the hottest file collections in the country, and there are shareware libraries with over 70,000 titles for IBM, MAC, Amiga, and Commodore users. Odyssey uses custom developed software originally derived from Galacticomm's The Major BBS. Odyssey Online, Computer Productions, 1307 South Shamrock, Monrovia, CA 91016; **(818)358-0936** voice; **(818)358-6968** BBS.



Michael Allen and the Computer Productions Staff

NINTH PLACE - WIZARD'S GATE BBS - (614)224-1635

Scoring ninth in the contest with 339 votes, Joseph Balshone's Wizard's Gate BBS operates in Columbus Ohio. This is one of the most unique bulletin boards you will encounter, run by a gentleman of apparently endless good humor quite willing to experiment, and his callers have responded on his behalf. He's aided in operating the system by his "loyal sidekick", Loretta Curry.

First, the BBS is free - quite in the spirit of the early days of BBSing. You can't give them money. There is no verification. No validation. And you get 90 minutes on your first call, and you can call up to nine times per day. In theory, you can spend 13.5 hours per day on this BBS without paying a dime. Given the not inconsiderable expense of operating a 10 line BBS with 12 gigabytes of file storage, we're not sure how, or perhaps why he does it, but the system is quite free of charge and those wishing to "donate" are politely encouraged to send it to any other local BBS that probably needs it.

Secondly, it doesn't run ordinary BBS software. The system is the flagship beta tester for a software system titled SH Systems BBS Software, written by Steve Harke of Battle Creek Michigan. We're still a little unclear as to whether this software is actually released yet, but Balshone has been working with Harke and the software for nearly four years now, and professes a great love for this masterpiece in process.

Most uniquely, the software offers a COMMAND DOT PROCESSOR. We're not sure what that is, but what it does is allow you to insert commands within e-mail messages themselves to perform such operations as CC, include files, change sections, change topics, and so forth. This seems like a terribly cunning idea.

Wiz Gate was started in November, 1989. Joseph Balshone, Wizard's Gate BBS, 463 E Town Street, Columbus, OH 43215; (614)224-2404; (614)224-1635 BBS

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TENTH PLACE - PLEASURE DOME BBS - (804)490-5878

Tom McElvy's Pleasure Dome BBS takes tenth place honors in the contest with **334** votes. Running Wildcat! software, Pleasure Dome is located in Virginia Beach, Virginia and is unabashedly adult in nature. While the system does eschew child pornography, bestiality, scanned magazine images, and other "illegal" images, it is entirely devoted to sexual fantasies, desires, and erotica. The system provides chat service, an impressive collection of erotic .GIF images, and carries message traffic from conferences such as ThrobNet, Perverts Anonymous, Friends & Lovers, NixPix, RIME, KinkNet, StudNet, FemNet, HotNet, SwingNet, GonzoNet, 18plus, LightNet, LampNet, Global Village Net, PlayNet, WildNet, Voyager, and Late Night. They total over 400 different adult conferences from these various networks. As they say in their promotional literature, Pleasure Dome is a **VERY** friendly place.

One of the keys to the success of Pleasure Dome is that they have beaten the male/female ratio extant online. By providing free lines specifically to the ladies, they have attracted a relatively large number of callers from the female persuasion, and probably more than a few claiming to be. In any event, McElvey avows that approximately 33% of their callers are in fact female, and the average user is 33 years old. They offer Matchmaker and Swingers classified ads online that are quite popular.

The system also offers HIV/AIDS information obtained directly from the Department of Health updated on a daily basis.

The system was started in 1985 on a Commodore 64 with three 160 KB disk drives and a single 300 baud modem. Today, they sport 10 lines at 14,400 bps. Pleasure Dome, PO Box 12126, Norfolk, VA 23502; **(804)473-1-SEX** voice; **(804)490-LUST** BBS.

As to the voters, they won't be forgotten either. Representatives from ZyXEL USA, Hayes Microcomputer Products, Inc., and U.S. Robotics will each draw two names from the 20,200 ballots cast to award their top of the line modem products. The drawing will be held on Thursday, August 26th, 1993 at 1:00 PM in Colorado Hall in the Broadmoor Hotel, during the ONE BBSCON. We calculate the odds of winning at one in **3367** - not bad for a free contest and a high-speed modem from the blue. Voters need not be present to win.

The top 10 BBSs in the contest will each be awarded a genuine lucite pyramid with cheap simulated walnut base and tin inscription plate trophy, a copy of the Boardwatch 100 Readers' Choice BBS List, an advertisement in Boardwatch, and our thanks for participating - at the same awards ceremony. BBS operators DO need to be present to get any of that. Like we said, this contest is for callers.

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The AQUILA BBS Team (Left to right: Kevin & Kristy Behrens, Steve Williams, Chris Babb)

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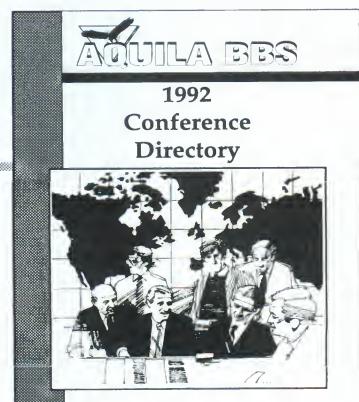


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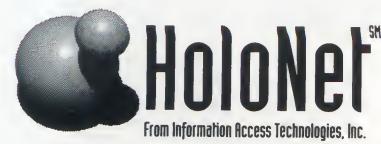
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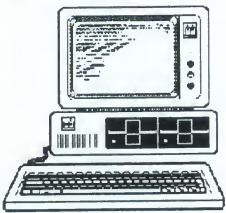
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Connecticut AC 203	Kevin Brook	Creative Edge BBS	(203)743-4044
Seattle AC 206/West Washington	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Tacoma Washington AC 206	Richard Langsford	AmoCat BBS	(206)566-1155
Autocad Related BBS	Jason Osgood	SAUG BBS	(206)644-7115
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
Astronomy/Space BBS	John Pickens	Starbase III BBS	(209)432-2487
Central California AC 209	Jack Porter/Madera UG	Zen Den Systems	(209)675-8436
Graphical User Interface BBS	David Shapiro	The Gooey (GUI) BBS	(212)876-5885
Southern California	Mike Hefferman	SOCAL Corner	(213)422-7942
96 List - 9600+bps BBS	Ken Sukimoto	Downtown BBS	(213)484-0260
Open Access UNIX Site List	Phil Eschallier	LGNP1 (login:BBS)	(215)348-9727
Pennsylvania AC 215/609/302	Ron Brandt	DSC/VOICENET	(215)443-9434
Cleveland Area 216	Eric Rickin	Wine Cellar	(216)382-2558
Conservation/Nature BBS List	D.Wendling/JS Christianso	Coin of the Realm	(301)585-6697
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Desktop Publishing BBS	Frank Atlee	Infinite Perspective	(301)924-0398
Medical Issues BBS	Edward Del Grosso	Black Bag	(302)994-3772
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(305)474-6512
California AC 310	Jim Walton	Illusions BBS	(310)804-3324
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
St. Louis AC 314	Beth Brooks	Fire Escape's Dir	(314)741-9505
ASP BBS Member List	Bob Ostrander	PBS-BBS	(317)856-2087
Engineering Related BBS	Arthur Petzelka	Computer Plumber	(319)337-6723
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
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Atlanta Area 404	Rodney Aloia	INDEX System	(404)924-8472
Orlando Florida AC 407	Matt Drury	London BBS	(407)895-1335
Baltimore Area 410	Brad Blase	Network BBS	(410)247-3797
Pittsburgh AC 412	Chas Stokes	Quad-Tech Systems	(412)262-4794
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Milwaukee Area 414	Jay Jadofsky	Priplanus	(414)442-0170
Arkansas Area 501	Bob Underdown	The Gaslight BBS	(501)444-8420
Louisville KY AC 502		Old Soldier's Home	(502)942-2848
Kentucky AC (502)	Dan Elder	National Data Exchg	(502)942-2848
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145
New Orleans BBS List	Jeff Jones	Southern Star BBS	(504)885-5928
Worcester MA AC (508)	Jim Metzler	Miwok Village BBS	(508)754-6512

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List of Gay/Lesbian BBS	Eric Blair	S-TEK BBS	(514)597-2409
AC 516 Free Shareware BBS	Harold Stein	Long Island Exchange	(516)385-7882
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Minnesota Twin Cities AC 612	Barry Watson	Abiogenetic BBS	(612)489-7983
San Diego, CA AC 619	Ron Dipold	ComputorEdge	(619)573-1675
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Virginia AC 703/804	Scott Dickinson	TOSOR BBS	(703)366-4620
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Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
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National 800 Number BBS List	Michael Long	Hayes Online	(800)874-2937
CompuCom Modem BBS List	Thomas Weathers	Referral Market BBS	(803)297-4395
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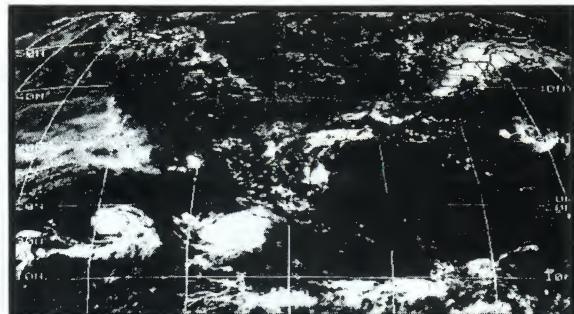
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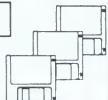
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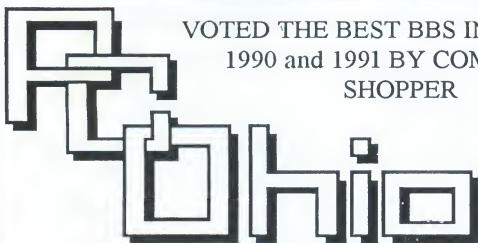
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Baudeville BBS (416)283-0114 Toronto Ontario Canada since 03/92. Sysop: Ian Evans. Using PCBoard 14.5a with 2 lines on MS-DOS 80386 with 2000 MB storage. US Robotics at 14400 bps. \$36 Annual fee. 1200 Usenet areas, RIME, Intelec, Nanet, C2C, Racenet, RF-Net, Throbnets, Medianet, Fidonet. 2+ gigs of files. Over 2200+ conferences. Internet mail. Fido: 1:250/304. The Economical Email Emporium. \$48 membership gets you \$185 in hw/sw coupons!

The U.S.A. BBS (501)753-8575 Little Rock Arkansas since 02/93. Sysop: Jeff Johnson. Using TBBS 2.2 with 16 lines on MS-DOS 80486 with 10200 MB storage. AT&T at 19200 bps. No fee. Most popular computers supported. DOS, Windows, & OS/2 files. Many games. One of the largest collections of Adult GIFS as well as scenic GIFS. Large adult area. Also many other sections including Religion, Kids, Business. Contests with v32bis modems

BUY-IT-WHOLESALE (503)479-4482 Grants Pass Oregon since 07/15. Sysop: Neil Agosta. Using WildCat 3.90S with 1 line on MS-DOS 80386 with 480 MB storage. Hayes at 14400 bps. No fee. Dedicated to seeing distributors' wholesale prices for computer products and to buying via BBS for 1% or less over wholesale. For PC, Mac, Unix, Atari, workstations, etc. Sysop is a computer dealer making sales with minimum overhead. Check it out.

TOWER of BABBLE (505)243-5810 Albuquerque New Mexico since 04/93. Sysop: Steve Cosmic Rico. Using MajorBBS 6.11 with 6 lines on MS-DOS 80486 with 600 MB storage. Twincom at 14400 bps. \$0.40 Hourly fee. New Mexico's Premium BBS, Chatlink National Live Chat Node, USA Today Daily, QWKNETs Echos with over 200 Forums, Multi-Player Games, Over 50 Current File Libraries including: Raytracing, Fractals, Morphing, Windows, Tourism, Lots of Gifs & Shopping w/ NM

Tiger Team Buddhist Information Network (510)268-0102 Berkeley California since 06/92. Sysop: Gary Ray. Using WildCat 3.0 with 3 lines on MS-DOS 80486 with 750 MB storage. Zoom at 14400 bps. No fee. America's Buddhist Online Service. Buddhist conferences, texts, translations, GIF artwork, programs and national event listings. DharmaNet & UseNet conferences, INTERNET e-mail. Connect with BUDDHIST MASTERS, monks/huns, scholars and lay practitioners.

The Gift Shop (tm) (510)689-4686 Concord, California since 09/92. Sysop: Waik Gan. Using WildCat 3.90 with 8 lines on MS-DOS 80486 with 7300 MB storage. US Robotics at 16800 bps. \$18.00 Quarterly fee. Northern Cal's Largest and BEST BBS! Over 7 Gigs of hard disk space (No CDROMs to slow us down). 250+ NEW and ORIGINAL files weekly! Reknown GIFs World Wide. The BEST scans in the WORLD! FREE Internet, Throbnets, HotNet, BRRAnet. VISA/MC

Substation BBS (516)364-4450 Woodbury New York since 04/86. Sysop: Paul Blaccard. Using PCBoard 14.5a with 3 lines on MS-DOS 80386 with 1600 MB storage. US Robotics at 16800 bps. No fee. Comics & animation, Nutrition, Corvette Forums. Home of Amateurs in Action Magazine. Direct Contact Adult Scans. Featuring premium adult fetish scans/ads and on-line articles. Different, provocative and free! Access with validation.

America's Suggestion Box (ASB) (516)471-8625 Ronkonkoma New York since 02/92. Sysop: Joe Jerszynski. Using TBBS 2.2 with 16 lines on MS-DOS 80486 with 3800 MB storage. Intel 14.4EX at 14400 bps. No fee. 24000+ files, ASP approved, Shareware Showcase, Boardwatch, USAtoday, Internet E-mail, City2City Echos! Would you like to see a computer product or service improved? Call and see why you and ASB can make a difference! Generous access time & download privs

Hi-Teck's Place (516)757-0210 Long Island New York since 07/91. Sysop: Hi-Teck Pete. Using PCBoard 14.5a with 6 lines on MS-DOS 80486 with 14000 MB storage. US Robotics at 19200 bps. \$20 Quarterly fee. BBS for Graphics Scans and Shareware. Over 50,000 Quality GIF & Hi-Color Scans Online, also DOS, WINDOWS & ADULT files. Register and Credit Card Membership Online. One of the Largest and Fastest growing BBS in the Northeast. Come and Teck Us Out for FREE

House Of Files BBS (516)938-6722 Hicksville New York since 08/85. Sysop: Jim Toro. Using TBBS 2.2 with 32 lines on MS-DOS 80486 with 23400 MB storage. Supra at 19200 bps. \$30 Quarterly fee. Largest file system in New York. Over 150,000 files ALWAYS online. Over 10,000 music files, 10,000 public domain clip art files ad tens of thousands of others. Call us and find out why hundreds of sysops subscribe to our system. Browse around for free!

Wolverine (517)695-9952 Freeland, Michigan since 07/88. Sysop: Rick Rosinski. Using Searchlight 3.00 with 5 lines on MS-DOS 80486 with 7500 MB storage. Infotel at 14400 bps. \$35 Annual fee. Mid-Michigan's Largest BBS with over 70,000 files. Special support for Windows, DESQview, Music, Games, Amiga, Mac. Official Support BBS for SkyGlobe! ASP Approved. ModemNews. Apogee, Epic MegaGames, MVP, Software Creations Distribution Site.

Sound Power Systems (517)792-4680 Saginaw Michigan since 01/91. Sysop: Ronald Gage. Using PCBoard 14.5a with 2 lines on MS-DOS 80386 with 2600 MB storage. US Robotics at 14400 bps. \$40.00 Annual fee. FidoNet/RIME/Intelec mail online. 4 hours a day access, 8 meg a day limit. Large Adult file section online. Friendly operator and atmosphere. Online doors including Tradewars. Color scanning available. Visa/MC registration Online (no surcharge).

"Delight The Customer" BBS (517)797-3740 Saginaw Michigan since 12/91. Sysop: Dennis A. Hauser. Using TBBS 2.2M with 4 lines on MS-DOS 80486 with 340 MB storage. Hayes at 9600 bps. \$57/ YR or FREE fee. For Customer Service, Training, Help Desk, Telemarketing and QA/QC professionals. Business/Professional BBS List. Call & list your bus/prof oriented BBS today! FREE MEMBERSHIPS FOR FILE UPLOAD!!

The Rock Garden (602)220-0001 Phoenix Arizona since 06/88. Sysop: Jeff Moriarty. Using MajorBBS 6.11 with 20 lines on MS-DOS 80486 with 1,000 MB storage. Infotel at 14400 bps. \$.50 Hourly fee. One of the strangest chat and game BBSes around! Dispatch messages through MajorNet or missiles through Global Destruction! On-line pizza, things you shouldn't do, file and adult areas, trivia sessions, and a lot of rocks! Not for the easily confused!

Cornville BBS (602)634-0144 Cornville Arizona since 01/93. Sysop: Doug Morgan. Using MajorBBS 6.01 with 2 lines on MS-DOS 80386 with 105 MB storage. Hayes at 2400 bps. No fee. Real Estate listing, also listing of Real Esatee brokers, mortgage brokers, and appraisers, want ads, match maker, teleconference, late night talk.

Somewhere Out There (602)838-9707 Phoenix Arizona since 02/93. Sysop: Jeff Wolkove. Using Coconet 3.3c with 8 lines on UNIX with 650 MB storage. ZyXEL at 14400 bps. \$12.50 Monthly fee. Somewhere out there is a place where people find each other. Unique COCONET-based graphical BBS for singles. Personal ads, chat, public meetings, special support groups for newly single, single parents, senior dating, etc. Anonymous and private. Try us!

Windows Download Center (607)722-5512 Vestal New York since 04/91. Sysop: Howard Bellis. Using Aunti 5.12 with 3 lines on MS-DOS 80486 with 540 MB storage. ZyXEL at 16800 bps. \$25 Annual fee. 2500 windows shareware programs, latest versions, with 200 new or upgraded programs monthly, based on an extensive national search.

The Manor House BBS (609)267-4124 Mt. Holly New Jersey since 05/93. Sysop: Alan Bowen. Using Major BBS 6.11 with 4 lines on MS-DOS 80486 with 770 MB storage. Hayes at 14400 bps. \$0.06 Hourly fee. Specializing in online entertainment and role playing games. Come join the fun and help us grow! Instant access available on your first call.

Men's Education Network International (612)464-7663 Forest Lake Minnesota since 09/92. Sysop: R F Doyle. Using PCBoard 15 with 1 line on MS-DOS 80386 with 200 MB storage. Cardinal at 9600 bps. No fee. Non-profit org. DIVORCE/GENDER ISSUES. Info on attorney referral, local orgs., lit., membership. Newsletter.

The Friendship Express (612)566-5726 Minneapolis Minnesota since 12/88. Sysop: Glen Williamson. Using Major BBS 6.03 with 25 lines on MS-DOS 80486 with 450 MB storage. Zmodem at 9600 bps. \$1/hr Hourly fee. We are primarily a contact/social board with members from all fifty states and several Canadian Provinces. Our members includes singles, couples, bi's, gays, lesbian, as well as those interested in alternative lifestyles such as leather, Xdress, etc.

ASA CompuHelp BBS (614)476-4058 Columbus Ohio since 05/92. Sysop: Jeff Binkley and Rick Korecki. Using PCBoard 15 beta with 5 lines on MS-DOS 80486 with 3600 MB storage. Hayes at 14400 bps. \$30/60 Annual fee. Central Ohio's fastest growing BBS! FidoNet, StormNet, FULL UseNet Feed, Internet E-Mail, CDROM drives and more! Featuring FULL Usenet feeds for low low prices. Known for our newsletter and great technical support! Check-us-out!

The 3rd Eye Electronic Erotic Magazine (615)227-6155 Nashville Tennessee since 05/86. Sysop: Michael Vetter. Using TBBS 2.0 with 8 lines on MS-DOS 80486 with 2000 MB storage. Hayes at 9600 bps. \$30 Annual fee. A friendly gathering place for couples and singles with an interest in the swinging lifestyle. Personal ads (all lifestyles), digitized photos of members, online chat, adult downloads, club information, Unique echos, lifestyle support, multiuser games.

Sounds Of Silence (615)449-5969 Nashville Tennessee since 07/92. Sysop: Jim Walton. Using Major BBS 6.03 with 32 lines on MS-DOS 80486 with 15000 MB storage. Practical Peripheral at 14400 bps. \$15 Monthly fee. Great "Live" Chat and Entertainment System. Games, 17 Gigs of files, forums, classifieds. 24 hour access, dating surveys, E-Mail, WATTS lines, credit card and 900 billing. 32 high speed lines. Online fortune telling. An interesting system.

PC Junction BBS (615)479-1047 Cleveland Tennessee since 01/90. Sysop: Doug Carpenter. Using PCBoard 15 with 3 lines on MS-DOS 80386 with 13000 MB storage. Zyxel U-1496E at 14400 bps. \$35 Annual fee. 130,000 + files. On-Line Magazines, USA Today, Intelec, Smartnet, Usenet (Internet), Throbnnet (Adult). Door Games, Worldwide Access thru CRIS (\$2 per hour 517-895-0510 to register). CDROMs at Wholesale Prices. Adult, Shareware.

12 GB, The Rose and Crown BBS (615)892-0097 Chattanooga Tennessee since 06/85. Sysop: David Ellison. Using PCBoard 15 with 6 lines on MS-DOS 80486 with 12000 MB storage. US Robotics at 14400 bps. \$33.00 Annual fee. Free 30 minutes per day with no ratios, no limits, 18 CDROMS on line, RIME Echomail. System is very fast. Over 130,000 files, over 12 Gigabytes. Download with first call.

Infoboard (617)581-5287 Swampscott Massachusetts since 05/92. Sysop: Richard Frenkel. Using PCBoard 14.5a with 2 lines on MS-DOS 80386 with 120 MB storage. Zoom at 14400 bps. No fee. We develop and distribute on-line database applications including FREE DOORS. Try our SOFTWARE PRODUCTS DATABASE which lets users find and read complete manufacturer specs on over 1,500 products - then buy them online. Pays commissions. Other doors too.

Executive Connection Online (617)621-6090 Cambridge Massachusetts since 07/86. Sysop: Marcia. Using Major BBS 6.03 with 15 lines on MS-DOS 80386 with 400 MB storage. Intel at 14400 bps. \$40.00 Annual fee. Home to some of the friendliest BBSers in New England! Stop by and say hello! Featuring Action Telecon with custom enter/exit messages, Globals, Global Actions, Graffiti Wall, MatchMaker, File Library, Games, Trivia, E-mail, Forums, Mail, Visa/MC/AmEx 18+

Tiffany Club of New England (617)899-3230 Waltham Massachusetts since 12/92. Sysop: Debra. Using WildCat 3.51 with 4 lines on MS-DOS 80386 with 120 MB storage. Goldstar at 2400 bps. \$25 Annual fee. Support and Education for the Transgendered Community, their Family, Friends and Spouses. Multi Node Chats. Resource Files and Extensive Message Areas for the Discussion of Related Issues. Public Access areas available. A Friendly and Caring Board.

The White Zone BBS (617)969-3138 Newton Massachusetts since 10/90. Sysop: David Saganey. Using TBBS 2.2 with 8 lines on MS-DOS 80386 with 2700 MB storage. US Robotics at 16.8k bps. \$25-75 Optional fee. 2.0+ GB of IBM MS-DOS Shareware, Adult Graphics, Midi & Soundcard Files, Flight Simulator, Geoworks, Windows, WazWare & More! Online Games, Classified Ads, BBS Listings, QWK Offline Mail Reader Support & PC Catalog Online! ASP Approved BBS

Classified Connection (619)566-7347 San Diego California since 08/84. Sysop: Bill Kennon. Using WildCat! 3.55 with 16 lines on MS-DOS 80386 with 2200 MB storage. US Robotics at 19200 bps. \$35 Annual fee. Features Buy, Sell, Swap Meet, national and local conferences, all original graphics. Classified Connection features Giffy Ent. 100% Original G, R, XXX rated graphics 100% licensed for BBS use! Ask us about Giffy Gold CD ROM sysop specials.

The Advanced System BBS (702)334-3308 Reno Nevada since 04/92. Sysop: Alan McNamee. Using TBBS 2.2 with 48 lines on MS-DOS 80486 with 16000 MB storage. Supra at 14400 bps. \$5 Monthly fee. The Advanced System was started to see how far BBS technology could be pushed. With over 150000 files online and some of the most advanced features of any BBS we support both adult and general access levels. With 23 of the TOP TBBS 3rd party dev its HOT!

Crystal Quill (703)241-7100 Arlington Virginia since 04/93. Sysop: Crystal. Using MajorBBS 6.11 with 48 lines on MS-DOS 80486 with 4,000 MB storage. US Robotics at 14400 bps. \$.60 Hourly fee. DC's fastest growing BBS! 48 line chat-based system with MailLink, Interlink. MajorNet ID: Crystal@CQI. 4 Gigs of files on CD ROM. Adult & teen areas, multiplayer games, MC VISA 900 instant access! First 2 hours FREE.

The Palace BBS (703)435-0114 Herndon Virginia since 01/93. Sysop: Nicolas Nowinski. Using PCBoard 15 with 1 line on MS-DOS 80386 with 320 MB storage. DigiComm at 14400 bps. \$15-30 Annual fee. We have recently added Internet/USENET to our system. I am also proud to announce to announce that we are for the small business and home office person. We are working to build a file base to suit these people. Good price Internet for the small office

SBG Online! (703)450-9456 Sterling, Virginia since 02/93. Sysop: Al Segura. Using PCBoard 14.5a with 1 line on MS-DOS 8088 with 700 MB storage. Cardinal at 14400 bps. No fee. Specialize in fonts and clipart. PIER-1 CD online. T-shirt, ballcap screen printers and Quorum products can be ordered online. VISA/MS accepted.

Starlit Southern Nights (706)356-7072 Lavonia Georgia since 02/93. Sysop: John Lowry. Using MajorBBS 6.1 with 3 lines on MS-DOS 80486 with 500 MB storage. AT&T at 14400 bps. \$.75 Hourly fee. Running Major BBS ver. 6.1. MajorNet Node ID: SSN. Large conference area, up and coming file library. Online multiuser games, Door games coming soon. Monthly subscriptions available, rates vary. Basic access is always FREE!

Comics, Cards and Collectibles (708)304-9804 Lake Zurich Illinois since 07/93. Sysop: Frank Pisarski. Using Searchlight 3 with 4 lines on OS/2 2.1 80486 with 250 MB storage. Practical Peripheral at 14400 bps. \$70 Annual fee. BBS catering to those with an interest in comic books, trading cards or any other collectible item. Numerous subboards allow for discussion, trading, buying, selling and finding what you're looking for to complete your collection. Articles and interviews

MidWest BBS (708)513-1034 St. Charles, Illinois since 02/84. Sysop: Steve Mills. Using PCBoard 15.0/M with 6 lines on MS-DOS 80486 with 2300 MB storage. US Robotics at 19200 bps. \$35 Annual fee. America's Professional Bulletin Board. Experienced, friendly SysOps whose only goal is TOTAL USER SATISFACTION. Tons of new files each wk. Free trial membership. PC-Catalog. All nodes up to 14,400 llink member, Internet Mail, Usenet, UsMail

COM*ONE (708)717-9370 Chicago Illinois since 05/92. Sysop: Craig Wells. Using MajorBBS 6.11 with 4 lines on MS-DOS 80386 with 6000 MB storage. Incomm at 2400 bps. \$29 Annual fee. Over 60,000 of the most current files with new files daily. All types of computers are supported. Over 130 Forums with MajorNet/MailLink. Adult Forums & Files. Entertaining games & Trivia. The Meeting Place Registry. Where Chicago's Adults come to Play!

The Computer SPORTS CONNECTION (708)734-1177 Chicago Illinois since 04/93. Sysop: Dan Eaton. Using TBBS 2.2 with 8 lines on MS-DOS 80386 with 1000 MB storage. US Robotics at 9600 bps. No fee. Connect FREE to Sports "Talk Radio" Computer Style! Featuring sports forums open discussion, sports info including schedules, baseball card exchange and classifieds for Boats, RV's, and used sports equipment. Editorials for new writers and USA Today.

Space City Grafix! (708)748-4025 Park Forest Illinois since 02/89. Sysop: Curt Phipps. Using PCBoard 14.5a with 1 line on MS-DOS 8088 with 275 MB storage. US Robotics at 19200 bps. \$35 Per 6 Mont fee. A BBS dedicated to offering you the best in hi-quality, hi-resolution science fiction-Fantasy GIF images. We continue to grow everyday, so give us a try. You won't be disappointed. Accepting VISA-MASTERCARD online. See you soon.

Chicago Syslink (708)795-4442 Berwyn Illinois since 06/81. Sysop: George Matyaszek. Using TBBS 2.2 with 10 lines on MS-DOS 80386 with 2400 MB storage. Intel at 14400 bps. \$20 Annual fee. Rated G, so the entire family can call! We offer a new CD-ROM disk online every week. 80 plus games & Chat facilities offer fun for everyone! Magazines like BBR, BOARDWATCH, HI-TECH & USA TODAY keep you informed. Fidonet/Internet to places beyond.

AlphaOne Online (708)827-3619 Park Ridge Illinois since 03/90. Sysop: Toby & Gloria. Using TBBS 2.2 with 16 lines on MS-DOS 80486 with 4600 MB storage. Hayes at 14400 bps. \$32-65 Annual fee. You've seen the rest-now try the BEST! 30,000+ Files. Online stores. HOT CHAT, matchmakers, adult games 100+ conferences. Fidonet, Adult Link, GayCom. Get the most for your online \$! CALL & mention this ad for FREE TRIAL. For more info voice-708-827-3615

THE WILD ONION! (708)993-0461 Elmhurst Illinois since 05/93. Sysop: Al Tantillo. Using MajorBBS 6.11 with 20 lines on MS-DOS 80486 with 4500 MB storage. US Robotics at 16800 bps. No fee. Adult Chat & Entertainment. 45,000+ files. RIP/GUI, INTERNET news & mail. Over 25 online/interactive games. Trivia Chat, Mention ad for discount. One of the Midwest's Premier Social & Interactive BBS's. Large adult forums area. Free Demo!

SATORI BBS (713)342-6561 Richmond Texas since 06/93. Sysop: Arthur Van Slyke, Jr.. Using Spitfire 3.3 with 1 line on MS-DOS 80386 with 120 MB storage. US Robotics at 14400 bps. No fee. Focus: Personal Information Service emphasizing Resilience. A Read-Only Board. Caller ID's kept Private! Board is part Free and part Subscription: Caller's choice!

The Liberty BBS (714)996-7777 Anaheim Hills California since 07/92. Sysop: John Galt. Using MajorBBS 6.11 with 58 lines on MS-DOS 80486 with 5420 MB storage. ZyXEL at 16800 bps. \$10 Monthly fee. Local phone numbers listed online for 8 area codes & PC-Pursuitable at D/CASAN/24 ATDT 9967777. Nationwide ChatLink, WorldLink, MailLink & Majornet. Internet E-Mail & Usenet newsgroups for subscribers. Free time on every call. Much much more!

THE PROMISED LAND (715)387-1339 Marshfield Wisconsin since 01/90. Sysop: Tim Brown. Using Custom 1 with 32 lines on MS-DOS 80486 with 20000 MB storage. US Robotics at 14400 bps. \$.30 hourly fee. Support BBS for NATIONAL SHAREWARE LIBRARY (tm) national archive of shareware, freeware, public domain software. Download or freq ARS FREE access program. RIP, live national teleconferences, 100+ forums, FREE DEMOPAK upon verification. Fido:1:238/500

Cyberia (717)840-1444 York Pennsylvania since 06/93. Sysop: Adam Viener. Using TBBS 2.2 with 6+ lines on MS-DOS 80486 with 1200 MB storage. US Robotics at 16800 bps. \$7 Monthly fee. Most friendly community in cyberspace. Full featured system including chat, news, entertainment, and lots of files. FREE Trial access for all new users.

The Next Generation BBS (718)236-8105 Brooklyn New York since 10/91. Sysop: Anthony Monti. Using PCBoard 15.0 with 2 lines on MS-DOS 80486 with 5000 MB storage. Supra at 14400 bps. \$.35 6 Months fee. Beam Aboard NYC Hottest BBS. This is your one stop BBS. We have over 2 Gigs of Files and 2 Gigs of ADULT GIFS. Also a Member of TrekNet Fido SmartNet KinkNet ThrobNet & CatNet. Mention BoardWatch & get 3 FREE Months Added to your Paid Subscription!

PARADISE NETWORK BBS (718)241-9007 Brooklyn New York since 06/89. Sysop: Luc'e. Using Custom 1.0 with 17 lines on MS-DOS 80486 with 1345 MB storage. Supra at 2400 bps. \$29 Annual fee. New York's Largest Adult BBS. Hundreds of singles & couples looking to chat, exchange mail, and meet! X-rated GIFs and animations. High female to male ratio. Free two week trial. 9600 v.32 (718) 241-9049. All adult, must be 21. Credit cards accepted.

Windup BBS (718)428-6123 New York New York since 01/92. Sysop: John Brooks. Using TBBS 2.2 with 12 lines on MS-DOS 80486 with 1800 MB storage. US Robotics at 14400 bps. \$50.00 Annual fee. An adult meeting place, with HeartBeat Matchmaker Database and GIFs of users online. Mature adults and couples meet online and offline. GIF previewing, very active message and chat area. Serious sensuality and frank sexuality. Free weeks trial for adults

Impax Online Chat (718)932-4702 New York City New York since 03/93. Sysop: Bob Gramaglia. Using Custom Videotex with 12 lines on MS-DOS 80486 with 700 MB storage. US Modem at 14400 bps. \$30 Quarterly fee. Unique service using special software that lets users; view and create animations, chat, download/upload photos to private files mailbox with free scanning service. First call 718-932-7710, 2400 to download free access software. Free demo. Visa/MC/Amex.

Mercury Opus (813)321-0734 St. Petersburg Florida since 09/88. Sysop: Emery Mandel. Using PCBoard 15 with 6 lines on MS-DOS 80386 with 10000 MB storage. US Robotics at 16800 bps. \$10 Monthly fee. HUGE message area, over 1300 conferences, 80,000 quality Amiga, Mac, DOS, Windows, OS/2 and X-rated files with new files daily, 10+ networks including Internet and Usenet, games, chat, matchmaker, fax gateway, BBS lists, instant access via credit card.

Antique Toys & Collectibles BBS (813)799-9459 Clearwater Florida since 06/93. Sysop: Clint Nye. Using MajorBBS 6.11 with 2 lines on MS-DOS 80486 with 500 MB storage. Reveal at 2400 bps. \$.35 Monthly fee. Sys provides user access to toys, trains, dolls, comics, cards, etc.. On-line Shopping Mall for Antique Toys & Collectibles. Advertise, sell, buy, trade, and "browse" collectibles. Set up your own "store". Presently no fee for buyers!

Antique Toys & Collectibles BBS (813)799-9459 Clearwater Florida since 06/93. Sysop: Clint Nye. Using MajorBBS 6.11 with 2 lines on MS-DOS 80486 with 500 MB storage. Reveal at 2400 bps. \$.45 Annual fee. System dedicated to antique toys & collectibles enthusiasts', hobbyists', collectors', & dealers. Online SHOPPING MALL runs 24hrs a day, 365 days a year. List your collection, 'E' Mail, Forums, etc. Small monthly fee for stores set up.

Panasia BBS (818)569-3740 Glendale California since 05/89. Sysop: William Padilla. Using PCBoard 14.5a with 2 lines on MS-DOS 80486 with 120 MB storage. US Robotics at 14400 bps. No fee. We offer Internet e-mail access and over 300 echomail conferences with no required fee whatsoever. EchoMail Networks carried: ILink, SciFacNet, Metrolink, and Cal-Link. Several awesome strategic door games are available. Modest file area. Call Us!

Digital Aspects (901)758-2580 Memphis Tennessee since 12/92. Sysop: Chuck Breazeale. Using TBBS 2.2 with 8 lines on MS-DOS 80386 with 1400 MB storage. US Robotics at 14400 bps. \$7.00 Monthly fee. ALWAYS the MOST of the BEST! 20 CD's ALWAYS online. If you can't find it here, then it can't be had! Direct link to the Shareware Distribution network, so always giving you the LATEST and the BEST! Over 40,000 Adult .GIF's and animations!

Shuttle Pad BBS (904)396-6644 Jacksonville Florida since 04/90. Sysop: Fred Sharp. Using PCBoard 14.5 with 3 lines on MS-DOS 80486 with 4.3Gi MB storage. Supra at 14400 bps. \$25.00 Annual fee. We offer Rime Echo-Mail Conf's, Multi-Chat, 70 Online Games 155 File Dir's with the lastest Files, Large Adult Section, and Must Must More! No Download Limit.

ShadowRift BBS (904)696-9322 Jacksonville Florida since 01/93. Sysop: Paul Taylor. Using PCBoard 14.5a with 3 lines on 386-40 Network with 3000 MB storage. US Robotics at 14400 bps. \$25 Optional fee. Gigabytes of Shareware available for download. Home of the best file request door ever, The Ultimate File Request Door. Call & Download the latest version under the name UFRD.ZIP or FREQ it from Fido Address 1:112/63 under the magic name REQUEST

Isle-Net (908)495-6996 North Middletown New Jersey since 10/84. Sysop: Dan. Using TBBS 2.2 with 12 lines on MS-DOS 80386 with 244 MB storage. US Robotics at 14400 bps. \$.45 Annual fee. Internet mail, Usenet newsgroups, erotic fantasies written by members. Free chat on your first call! Challenging games, lots of files to download. Stop by and have your Tarot cards read online. We do it better because we've done it since 1984!

The Dealmakers BBS (908)730-9002 Belle Mead New Jersey since 07/93. Sysop: Ted Kraus. Using PCBoard 14.5A with 3 lines on MS-DOS 80386 with 100 MB storage. Hayes at 19200 bps. No fee. Covers all aspects of commercial real estate, including property for sale, property for lease, questions & answers on all aspects of managing & developing commercial real estate and shareware on real estate.

InfoMarket Express (908)879-7209 Chester New Jersey since 01/93. Sysop: Edward Brzezowski. Using PCBoard 14.5a with 3 lines on MS-DOS 80486 with 400 MB storage. Hayes at 14400 bps. No fee. InfoMarket Express - Where information is bought and sold online. Free access, no subscription or registration fees. Providers make money when their files are sold. Please note that 908 is a new area code in NJ and not a 900#.

Bits and Bytes BBS (909)356-5762 Fontana California since 09/91. Sysop: Barly Redsar. Using PCBoard 15.0/10 with 7 lines on MS-DOS 80486 with 6500 MB storage. US Robotics at 16800 bps. \$20 Annual fee. BEST BBS around! You do not believe us? Well call and find out for yourself! How can you go wrong? Over 35000 files online (every week we have 500 new files), 50 Door games, 600 conferences (RIME, U'NI, Rosenet, & Throbnnet). Large selection ADULT ONLY GIF

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Gateway Communications BBS	(714)863-7097	Online Chat Service - Adventure Games - National Chatlink	Carol De Jesus	Rockwood, MI
Gateway On-Line	(313)29-5571	Novell Netware/TCP-IP Shareware Utilities	Jeff Breitner/Bill Mullen	Lafayette, CO
GDP Technologies	(303)673-9470	Interactive Chat/Multiplayer Games, Usenet/Internet, E-mail	Tom Getty's	San Diego, CA
Genera, The	(619)28-8616	Outstanding IBM Shareware on a small system	Marc Teitler	Boulder, CO
GISNet BBS	(303)447-0927	Customer support for Major BBS	Bill Thoen	Philadelphia, PA
GLIB	(703)578-4542	Graphics Information Systems/Mapping topics	Community Educational Svcs. Foundation	New Hartford, CT
GPO WINDO Online Service	(202)512-1387	Gay and Lesbian Information Bureau - 111 Lines - 9600 bps	US Government Printing Office	Berkeley, CA
Greenpeace Environment	(415)15-9108	Fed Information from EPA, DOE, State Department - others.	Dick Dillman/Greenpeace	Arcata, CA
Hayes Advanced Systems Support	(800)874-2997	Ecological and Peace Issues - Disarmament/Toxics/Wildlife	Hayes Microcomputer Products	Norcross, GA
HeartlandFree-net	(309)674-1100	Customer Support Line for Hayes Customers. V-series/Ultra	Peoria County Board/Bradley University	Peoria, IL
Herpnet/Satronics TBBS	(215)698-1905	Community Online Service - Free Internet E-Mail Boxes	Mark Miller	Kansas City, MO
HH Info-Net BBS	(203)246-3747	Reptile and Amphibian Studies - Poison Snakes/Toads/Fish	Lee Winsor	Ottawa, Ontario, Canada
HoloNet	(510)704-1058	MS Windows and OS2/Files our specialty	INFORMATION ACCESS TECHNOLOGIES, INC.	Dallas, TX
Home Power Renewable Energy BBS	(707)822-8640	National Access. INTERNET, USENET, CHAT, GIFS, FILES	Dou Kuhha/Redwood Alliance	New York, NY
HouseNet BBS	(410)745-2037	Photovoltaics/Micro-hydro/Generators	Gene and Katie Hamilton	Manhattan, NY
Howard's Notebook 1:280/25	(816)331-5868	Community Online Service - Free Internet E-Mail Boxes	Jim Howard	Kansas City, MO
Hysteric	(613)231-7144	Environmental, Peace, Justice since 1982 - 4 nodes	Russell McOrmond	Ottawa, Ontario, Canada
IBM National Support Center BBS	(404)835-5300	MS Windows and OS2/Files our specialty	Arthur Geffen	Berkeley, CA
Inbound/Outbound/Teleconnect	(212)989-4675	National Access. INTERNET, USENET, CHAT, GIFS, FILES	Intel Corporation PCEO Division	Bellevue, WA
Index Systems	(404)924-8414	Telephone Sales Trade Magazine Online Service	Mike Sussell	Dallas, TX
InfoHost Demo BBS	(201)338-2253	Excellent list of Atlanta BBS systems online	Don Shepherdson	Minneapolis, MN
IMS of Court, The	(144)616-52620	Demo BBS for InfoHost BBS Software - Multiline - Database	JDR Microdevices	Boulder, CO
Intel PC/CEO Support BBS	(503)645-62725	Environmental, Peace, Justice since 1982 - 4 nodes	Alpha Systems Inc./Bill Griffin	Tucson, AZ
Invention Factory	(212)274-8110	46 Lines - 100 Directories - Full Usenet Feed - 8-2 GB	Keith P. Graham	San Francisco, CA
Investor's Online Data	(206)285-5359	Online Investment/Stock Market Information/Tech Analysis	Federal Reserve Bank of Minneapolis	Spokane, WA
JDR Microdevices BBS	(408)559-0253	Demo BBS for InfoHost BBS Software - Multiline - Database	Mike Sussell	Montreal, Quebec
JOBBS	(404)992-8937	Online Hardware Order - Catalog - 1.1 GB Files - Quizzes	Don Shepherdson	Beaver Falls, PA
Keith Graham Shareware Support	(914)623-0039	Online Job Listings - 2186 Technical Pos. - 10,000 Corps.	JDR Microdevices	Golden, CO
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Meeting Works, The	(212)737-6732 Meeting/seminar/convention planning information	John Mackenzie	New York, NY
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Micro Laundry, The	(415)598-0398 2.2 GB Downloads - Your Online Software Source - Boardwatch	Thomas Nelson/Clockwork Software	San Jose, CA
Micro Message Service	(919)773-6674 USA Today/Boxoffice Magazine - Large Download Area	Mike Stroud	Raleigh, NC
MicroTec Technical Support BBS	(206)649-9836 Support for Popular R:Base Relational Data Base System	MicroTec Corporation	Redmond, WA
Microsoft Download BBS	(206)936-6735 Windows Technical Notes and Support Information	Microsoft Corp/Scott J. Honaker	Bellevue, WA
Microsystems Software Inc.	(508)875-8009 HandiWare Software for Handicapped - CodeRunner C Utilities	MSI - Reed Lewis	Framingham, MA
MindVox	(212)989-4141 Internet Access, E-Mail, Newsgroups, ftp/telnet	Phantom Access Technologies	New York, NY
Minnesota Spacenet	(612)920-5566 Minnesota Space Frontier Society - NASA News	Ben Hurret	Minneapolis, MN
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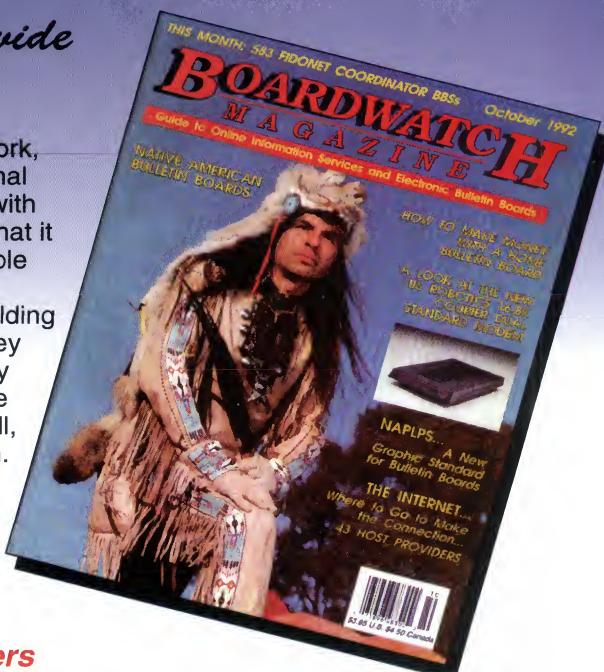
BOARDWATCH MAGAZINE

Guide to Online Information Services and Electronic Bulletin Boards

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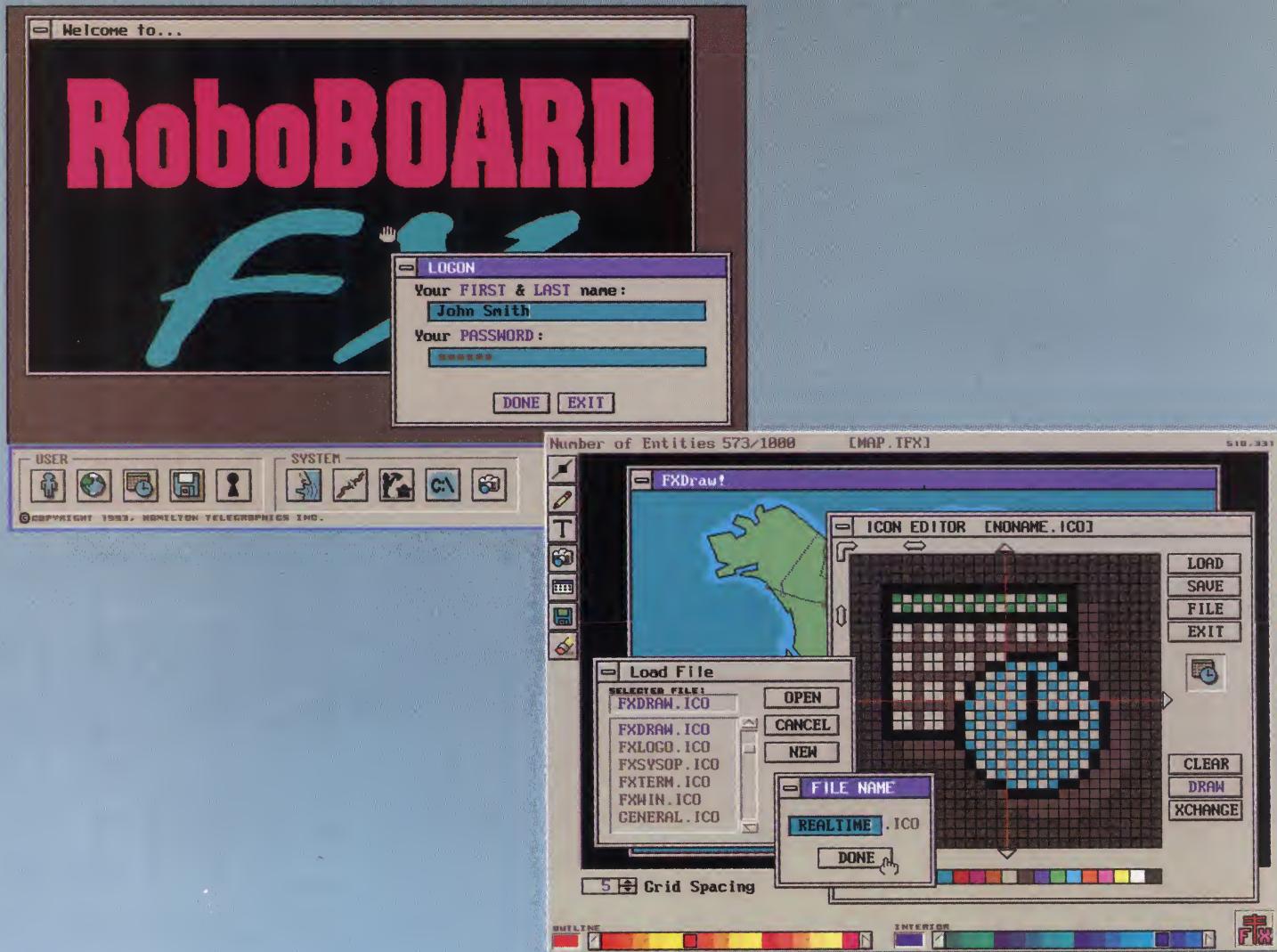
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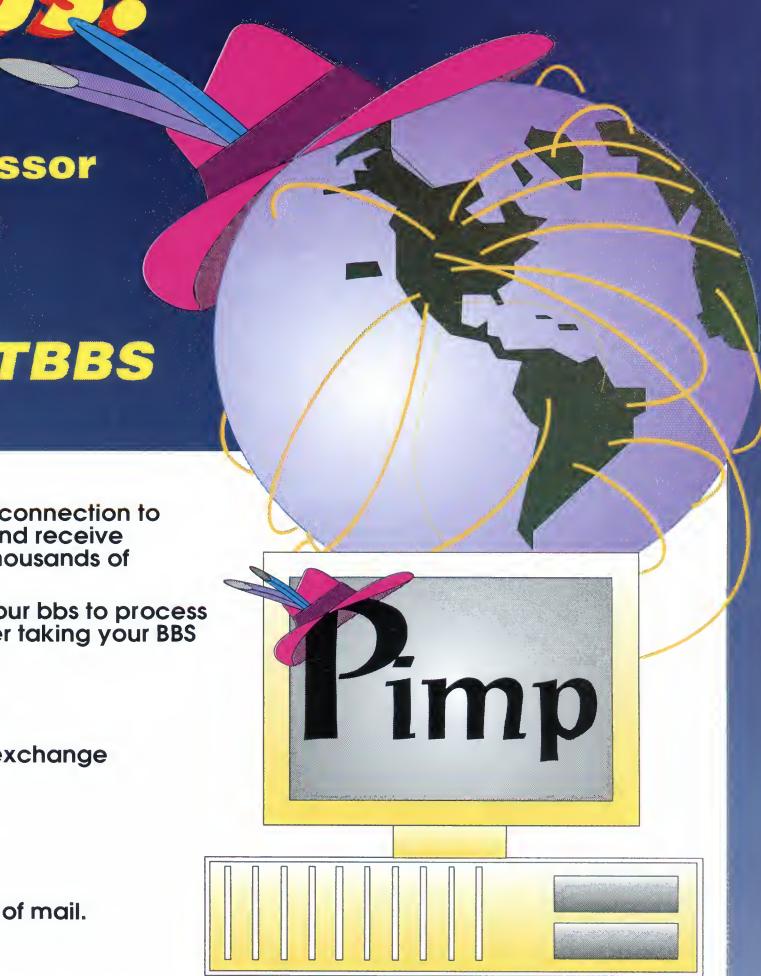
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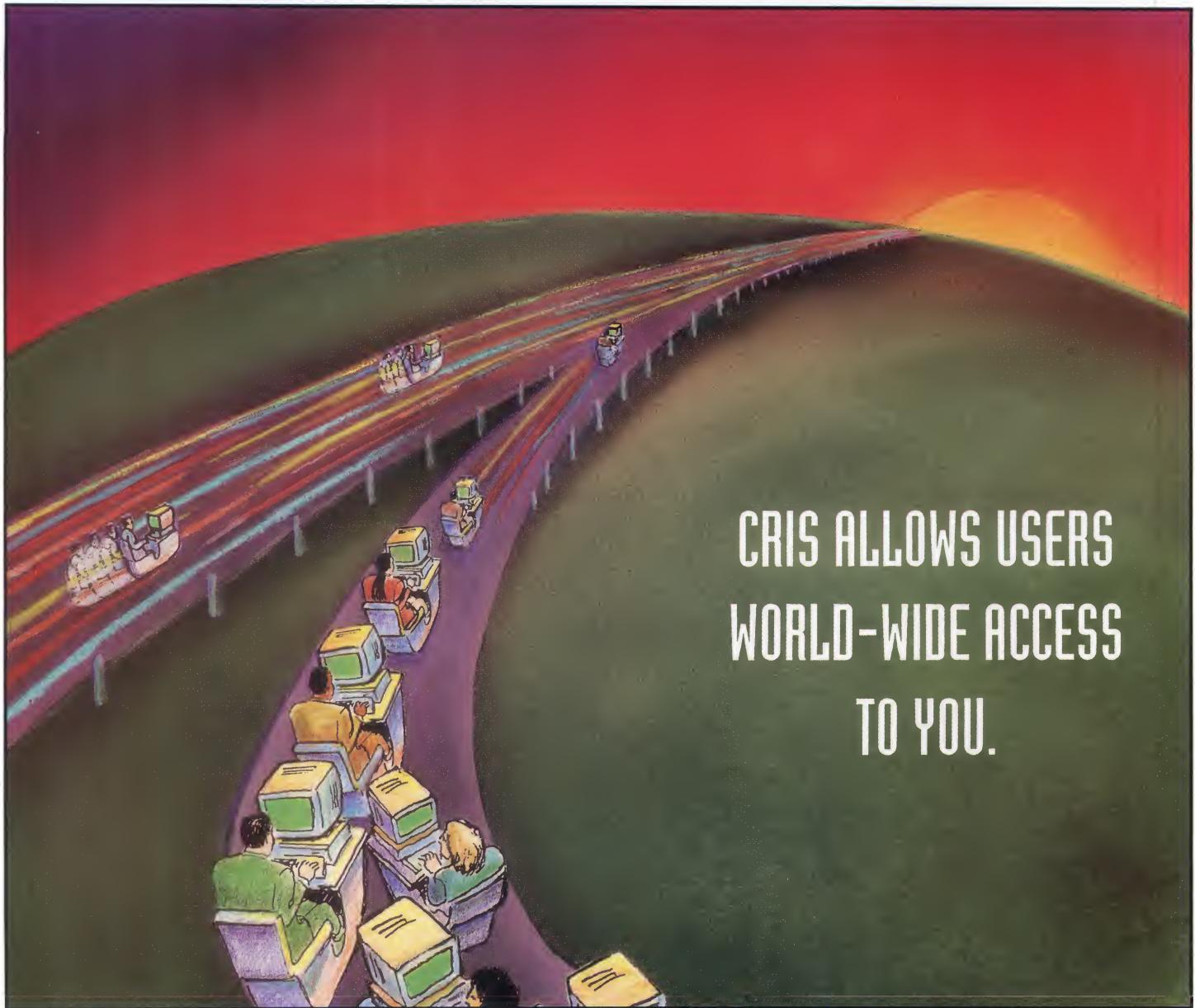
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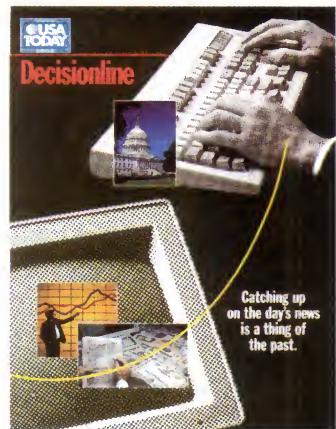


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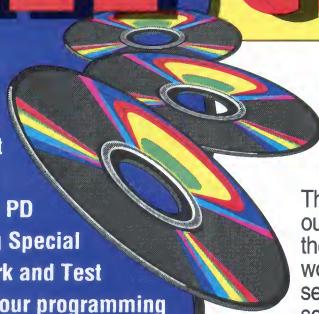
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